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ABSTRACT

A list of rare, and often unique, facilities in the western part of the United States is presented that is designed to serve as a resource for researchers. The list of facilities is a guide to what uncommon equipment, centers or institutes, and collections are available at western higher education facilities and what provisions exist for sharing those facilities. The information was obtained through mail requests in late 1979 to all residents and public information officers in all graduate-level colleges and universities in the Western Interstate Commission for Higher Education region. The respondents nominated unique facilities, verified the accuracy of the description, and categorized the facility's work into primary and secondary research fields. The catalog contains 294 entries that include equipment, such as electron microscopes and nuclear reactors; centers or research institutes, such as laboratories and land preserves; and collections, such as specialized libraries or art galleries. Each entry contains a description of the facility, the name and address of the director or another individual to contact for further information, and the arrangement through which researchers may use the facility. While some facilities are open to the public, others are more restricted and require individual arrangements. The catalog is organized into 14 chapters, which represent the primary research applications of the facilities. There are two indexes: one lists the facilities by institution; the other by primary and secondary research fields. A facility description form is appended. (SW)

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Catalog of Uncommon Facilities in Western Colleges and Universities

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HE014590

Compiled by
DENNIS VIEHLAND
Research Assistant
Graduate Education Project

Western Interstate Commission for Higher Education

WICHE
Improving Education In The West

WICHE, the Western Interstate Commission for Higher Education, is a nonprofit regional organization. It helps the thirteen member states to work together to provide high-quality, cost-effective programs to meet the education and manpower needs of the West. Member states are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

The WICHE Project on Expanding Regional Cooperation in Graduate and Professional Education encourages a regional perspective in planning for graduate education by promoting cooperation, coordination, and resource sharing among institutions and by disseminating information about trends in graduate education. The Graduate Education Project is supported by a grant from the Carnegie Corporation of New York and by WICHE state dues through the Student Exchange Program.

Cover photos, clockwise from left: electron microscope, Department of Molecular, Cellular, and Developmental Biology, University of Colorado, Boulder; sea-going research vessel R/V Cayuse, Moss Landing Marine Laboratories, San Jose (California) State University; Fiske Planetarium, University of Colorado, Boulder.

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Foreword

WICHE's Project on Expanding Regional Cooperation in Graduate and Professional Education promotes resource sharing among graduate and professional education institutions in the West. This listing of unique and uncommon facilities at western higher education institutions is another step toward that goal.

As the institutions' capital expenditure budgets decrease and they find it difficult to acquire new equipment or build new laboratories, graduate faculty and students are forced to maximize the use of existing research facilities. This list of facilities is a guide to what uncommon equipment, centers or institutes, and collections are available in the West and what provisions exist for sharing those facilities.

Sharing facilities such as those listed here helps improve researchers' access to educational and research opportunities. Resource sharing also has financial benefits. Schools that share facilities can support them in part through users' fees, and institutions can avoid the expense of duplicating resources available in other institutions or states.

To some extent, this catalog can be considered as a list of "centers of excellence" in graduate research, a way for institutions to demonstrate to state officials and private donors the special services the school offers. It shows that the West has many extraordinary facilities and good reason to be proud of them.

Boulder, Colorado
July 1981

Phillip Sirotkin
Executive Director
Western Interstate Commission
for Higher Education

Acknowledgements

The preparation of any reference document requires the cooperation of a large number of individuals, and this catalog is no exception.

For each facility included in the catalog, someone, usually the director of the facility, had to take the time to write a description of the facility and, subsequently, to verify the information. The cooperation of the facilities' staffs is greatly appreciated.

Several WICHE staff members also contributed to the catalog. Lilla Engdahl, a former member of the WICHE staff, initiated its development. Norman Kaufman and Barbara Krauth contributed many hours in sorting and editing the facility descriptions. Cherie Pedersen and Edith Modafferi provided secretarial support. I am especially indebted to Mrs. Pedersen for spending many thankless hours in front of a word processing terminal making editorial changes in these descriptions.

Dennis W. Viehland

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Additions to the listing; comments about its format, content, and scope; and suggestions for improvement are welcome.

As an initial endeavor, the catalog suffers from some deficiencies that the user should be aware of. First, some uncommon facilities undoubtedly have been left out. Although most institutions responded to the request for nominations, some did not respond or chose not to participate. Even among those institutions that submitted nominations, it is possible that some facilities were overlooked or were established only recently. In order to make the next edition of this catalog more comprehensive, readers are encouraged to use the Facility Description Form in the Appendix to nominate additional uncommon facilities.

A second deficiency stems from the fact that our definition of an "uncommon facility" was quite liberal. As the WICHE staff reviewed the nearly 400 nominations, we recognized that we lacked the expertise to judge accurately the uniqueness of many of the facilities, some of which are highly specialized. We therefore followed the guideline of "when in doubt, include it." For the second edition of the catalog, a panel of advisers will assist in evaluating the uniqueness of the nominated facilities to determine which should be included.

Finally, it should be noted that there are other reference sources that describe uncommon facilities in the West. We refer interested individuals to the following sources for more information about these facilities:

Research Centers Directory (6th edition). Edited by Archie M. Palmer. Detroit, Michigan: Gale Research Company, 1979.

> A guide to university-related and other nonprofit research organizations established on a permanent basis and carrying on continuing research programs in Agriculture, Business, Conservation, Education, Engineering and Technology, Government, Law, Life Sciences, Mathematics, Area Studies, Physical and Earth Sciences, Social Sciences and Humanities.

Subject Collections (5th edition). Compiled by Lee Ash. New York: R. R. Bowker Company, 1978.

> A guide to special book collections and subject emphases as reported by university, college, public and special libraries and museums in the United States and Canada.

Directory of Special Libraries and Information Centers (6th edition). Edited by Margaret L. Young and Harold C. Young. Detroit, Michigan: Gale Research Company, 1981.

> A guide to special libraries, research libraries, information centers, archives, and data centers maintained by instiutions, nonprofit organizations, and societies in the fields of Science, Technology, Medicine, Law, Art, Religion, History, Social Sciences, and Humanistic Studies.

Introduction

The staff of the Project on Expanding Regional Cooperation in Graduate and Professional Education of the Western Interstate Commission for Higher Education prepared this catalog as a resource for researchers in the West. It was developed in several steps.

In late 1979 letters requesting nominations of unique facilities were sent to all presidents and public information officers in all graduate-level colleges and universities in the WICHE region. A majority of the institutions responded to the request for nominations.

Later, the facility directors were asked to verify the accuracy of the description or provide additional information. Each director was also asked to categorize the facility's work into primary and secondary research fields to aid in developing chapter classifications and indexes.

The WICHE staff then reviewed each facility description, making editorial changes to ensure consistency. Finally, the entries were organized into chapters and the indexes were prepared.

The catalog contains 294 entries that include equipment, such as electron microscopes and nuclear reactors; centers or research institutes, such as laboratories and land preserves; and collections, such as specialized libraries or art galleries.

Each entry contains a description of the facility, the name and address of the director or another individual to contact for further information, and the arrangement through which researchers may use the facility. While some facilities are open to the public, others are more restricted and require individual arrangements.

This catalog is organized into fourteen chapters, which represent the primary research applications of the facilities listed. There are two indexes: one lists the facilities by institution; the other by primary and secondary research fields. For example, although a specific nuclear reactor is used primarily for agricultural research, it may also be used for medical or engineering applications. Thus it would be listed in the agriculture chapter and indexed under agriculture, medicine, and engineering.

This edition of the Catalog of Uncommon Facilities in Western Colleges and Universities is a first attempt at compiling a list of rare, and often unique, facilities for resource sharing in the West. Future editions of this catalog are planned. To facilitate the preparation of the later editions, the facility descriptions and indexes have been recorded in word processing data banks, which can be revised easily.

Encyclopedia of Information Systems and Services (3rd edition). Edited by Anthony T. Kruzas. Detroit, Michigan: Gale Research Company, 1978.

> A guide to information storage and retrieval services, data base procedures and publishers, online vendors, computer service companies, computerized retrieval systems, micrographic firms, libraries, government agencies, networks and consortia, information centers, data banks, clearinghouses, research centers, associations and consultants.

A Guide to Archives and Manuscripts in the United States. Edited by Philip M. Hamer. New Haven, Connecticut: Yale University Press, 1961.

1. Agriculture and Natural Resources

AGRICULTURE EXPERIMENTAL STATIONS AND FARMS (1)

University of Arizona

Located in major agricultural production areas in Pima, Maricopa, Graham, Pinal and Yuma Counties in Arizona, the experimental farms are for crop and animal research of importance to Arizona.

Sharing Arrangements: Some space has been available to qualified investigators from other states where mutually advantageous reciprocal arrangements have been worked out.

L. W. "Pete" Dewhirst, Director, Arizona Agriculture Experimental Station, University of Arizona, Tucson, Arizona 85721.

AGRICULTURE LIBRARY COLLECTION (2)

University of California, Davis

Agricultural subject collections are maintained in the following areas: Agriculture records of apiculture associations, beekeeping material, papers for four California apiculturists; lug label collections--approximately 1,500 fruit-box labels used by California citrus growers; nursery catalogs--the history of cultivated plants reflected by approximately 7,000 nursery catalogs from the U.S. and various foreign countries; Luther Burbank Collection-- principally correspondence between Burbank and E.J. Wickson.

Sharing Arrangements: Photocopying where possible.

Donald Kunlz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

AGRICULTURE LIBRARY COLLECTION (3)

University of California, Davis

The F. Hal Higgins Library has a collection of 350,000 items on the history of agriculture and agricultural mechanization. The collection includes: documentary history on the development of agricultural machinery in Europe and the New World; extensive files of U.S. company catalogs, manuals, parts books, photographs, company correspondence, and advertising; complete and incomplete runs of house organs for many American manufacturing companies; complete run of Pacific Rural Press; and foreign manufacturers' catalogs.

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Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

ENVIRONMENTAL LIBRARY (4)

University of Montana

The Environmental Studies Program has a specialized collection dealing with a broad range of environmental issues (e.g., air pollution, water resources, energy, fuels and minerals, pesticides and herbicides, radiation and hazardous materials, population-demography, agriculture-food production, solid waste) with special emphasis on Montana and the Northern Rockies region.

Sharing Arrangements: Resources are available to interested persons through two-week check out.

William Tomlinson, Director, Environmental Library and Research Specialist, Environmental Studies Program, University of Montana, Missoula, Montana 59812.

FISHERIES LABORATORY (5)

University of Alaska, Juneau

The University of Alaska, Juneau Fisheries Laboratory, located at Auke Bay, has access to a diversity of freshwater and marine environments. The facility houses physical and biological science teaching laboratories, a small research laboratory, classrooms and offices. The research lab holds fish culture apparatus, a living stream and heat incubators, and electrophoresis equipment. Specialized equipment includes a superspeed centrifuge, a liquid scintillation counter, a gas chromatograph and an ultra violet/ visible spectrophotometer. A 42-foot research vessel is available for near shore projects. Future plans are to expand the building to achieve laboratory and field fishery research capabilities for staff and students in the marine and coastal freshwater environments.

Sharing Arrangements: The National Marine Fisheries Service is adjacent to the Fisheries Building and the two units have a cooperative arrangement with regard to special facilities, equipment, and personnel.

Dr. Richard Gard, Director, Division of Fisheries and Natural Sciences, University of Alaska, Juneau, P.O. Box 1447, Juneau, Alaska 99801.

FOOD AND AGRICULTURE ORGANIZATION PUBLICATIONS COLLECTION (6)

University of California, Davis

This collection contains the publications of the Food and Agriculture Organization of the United Nations (FAO) as listed in FAO Documentations. The publications are in microfiche, beginning in early 1977. Publications are filed by FAO accession number, which should be cited in inquiries. Fiches are received approximately one year after publication of the FAO Documentation issue in which they are listed.

Sharing Arrangements: By purchase of microfiche duplicates or photocopy through interlibrary loan.

Katherine Mawdsley, Head, Government Documents Department, Shields Libary, University of California, Davis, Davis, California 95616.

FOOD TOXICOLOGY AND NUTRITION LABORATORY (HEPATOMA LAB) (7)

Oregon State University

The Food Toxicology and Nutrition Laboratory is a research laboratory for food toxicology and nutrition. It contains offices, labs, and fish (or animal) holding facilities.

Sharing Arrangements: Facilities and personnel are at times available to do investigations and studies for other departments and agencies. Depending on workload and space, the facilities could be made available to qualified scientists from other departments for similar or compatible work.

Russell O. Sinnhuber, Professor of Food Science and Technology, Agriculture Experimental Station, Oregon State University, Corvallis, Oregon 97331.

FOREST AND CAMP (8)

University of Montana

Lubrecht Forest is a 28,000 acre research facility offering a variety of western conifer timber types, which can be utilized for field research. Some housing is available, although limited in winter. Laboratory space is also available on a limited basis. Lubrecht Camp provides housing for 40-50 students involved primarily in summer, outdoor-oriented educational programs.

Sharing Arrangements: Could be shared with individuals wishing to pursue research projects on or adjacent to the forest. Also, possibilities exist for more extensive summer educational programs utilizing the camp (if scheduling can be arranged).

Benjamin B. Stout, Dean, School of Forestry, University of Montana, Missoula, Montana 59812.

FOREST RESEARCH LABORATORY (9)

Oregon State University

Unique facilities are mostly those having to do with the Forest Products Research Program, i.e., timber testing machines, pulp and paper making and testing equipment, lumber drying kilns, pressure treating retorts, etc.

Sharing Arrangements: Sharing arrangements can be made on an individual basis.

Dr. Helmuth Resch, Department Head, Forest Products Department, School of Forestry, Oregon State University, Corvallis, Oregon 97331.

INSECT LABORATORY (10)

Montana State University

The USDA Rangeland Insect Laboratory and Montana State University Entomology Specimen Collection has a large collection of grasshoppers and other insects. Included in the collection are introduced species of beetles to control mush thistle and Russian thistle.

Sharing Arrangements: No formal agreements exist. Widespread sharing of the thistle control program has already been done and is available.

J. A. Onsager, USDA Rangeland Insect Laboratory, Montana State University, Bozeman, Montana 59717. Telephone (406) 994-3344.

ISOLATION GREENHOUSE (11)

Montana State University

Description was not provided by the institution.

Sharing Arrangements: Sharing arrangements are unknown.

Dr. Lark Carter, Associate Dean, College of Agriculture, Montana State University, Bozeman, Montana 59715. Telephone (406) 994-3681.

MONTANA FOREST INDUSTRIES DATA COLLECTION SYSTEM (12)

University of Montana

A comprehensive data system for the Montana forest industries covering raw material sources by ownership and geographic area; raw material utilization; production; type of equipment in use; product shipments; and other information for the year 1976, by county or county groups.

Sharing Arrangements: Available to all interested persons (charge for out-of-pocket costs).

Charles Keegan, University of Montana, Missoula, Montana 59812.

RANGE MANAGEMENT STUDY CENTER (13)

California State University, Fresno

The San Joaquin Experimental Range is a 4,200 acre USDA experimental range for range management studies.

Sharing Arrangements: Special educational and research experiences are available to students on a cooperative basis, for short-term, contract, or regular academic year periods.

Dr. Charles M. Smallwood, Dean, School of Agriculture and Home Economics, California State University at Fresno, Fresno, California 93740.

SEAFOODS LABORATORY (14)

Oregon State University

This is a laboratory and processing pilot plant for research of and/or development of seafoods; and/or the processing of seafoods.

Sharing Arrangements: Now provides office space for Oregon Otter Troll Commission. Facilities have been used by scientists from other university departments and state agencies.

David L. Crawford, Program Director, Seafoods Laboratory, Oregon State University, Corvallis, Oregon 97331.

VITICULTURE AND ENOLOGY COLLECTION (15)

University of California, Davis

The Viticulture and Enology Collection consists of the following subject collections: (1) Cebis Collection--graphic collection including approximately 1,000 European wine labels as well as wine lists, menus, pamphlets, and other material related to the wine industry in central Europe; (2) wine bottle labels--collection of labels used between 1963 and 1968 on bottles of wines and liquors imported into the U.S. or bottled here.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

VITICULTURE RESEARCH CENTER (16)

California State University, Fresno

The Viticulture Research Center contains specialized laboratories and environmental chambers for viticulture research (including raisins). The Research Center also includes the Enology Building for the study of wine making, wine processing and other research facilities.

Sharing Arrangements: The center could give special educational and research experiences to students on a cooperative basis, for short-term, contract, or regular academic year periods.

Dr. Charles M. Smallwood, Dean, School of Agriculture and Home Economics, California State University, Fresno, Fresno, California 93740.

WILDERNESS INSTITUTE (17)

University of Montana

The Wilderness Institute has for five years addressed needs in research and public and continuing education. The Institute conducts summer field studies and operates an information center. The fall program called "Wilderness and Civilization" is an interdisciplinary package of 18 credits in English, philosophy, humanities, and forestry.

Sharing Arrangements: Students from other institutions have come here for the "Wilderness and Civilization" fall program and to do summer field studies. Information on the Wilderness Institute files are available to other interested faculty, students, and researchers.

Dr. Robert R. Ream, Director, Wilderness Institute, School of Forestry, University of Montana, Missoula, Montana 59812.

WOOD CHEMISTRY LABORATORY (18)

University of Montana

The research laboratory is equipped with a variety of specialized instruments for the investigation of various plant materials and related chemical problems. Some of the equipment available includes: GLC, HPLC, EPR, DSC, DTA, TG, and TEA. The current projects are pyrolysis and combustion of cellulosic materials, fire prevention and flameproofing, fuels and chemicals from biomass, and chemistry and ecology of sagebrush.

Sharing Arrangements: These facilities are frequently made available for use by graduate students, post-doctoral fellows, faculty members, and visiting scholars.

Dr. Fred Shafizadeh, Professor and Director of the Wood Chemistry Laboratory, Department of Chemistry, University of Montana, Missoula, Montana 59812.

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2. Architecture and Environmental Design

ARCHITECTURE COLLECTION (19)

Arizona State University

The Howe Branch Library contains approximately 15,000 volumes of architecturally related materials including 120 periodicals. The library includes a Paolo Soleri archive of published materials and a special Frank Lloyd Wright collection.

Sharing Arrangements: Available on interlibrary loan.

Katherine Weir, Librarian, Howe Branch Library, Arizona State University, Tempe, Arizona 85281.

ARCHITECTURE MEDIA CENTER (20)

Arizona State University

The Media Center contains 50,000 35mm color slides, films, audio and video tapes, a film editing production room, a photo lab and major support services.

Sharing Arrangements: None, except by special arrangements with the manager.

Richard Altman, Manager, Media Center, College of Architecture, Arizona State University, Tempe, Arizona 85281.

BUILDING ENVIRONMENT AND ENERGY LABORATORY (21)

University of Utah

The laboratory consists of a 20 ft. x 20 ft. x 10 ft. steel frame with demountable wall and window panels. It is mounted on a crane turntable which allows for 360-degree turns for varying the facade orientation. The facility lends itself to study of energy conservation, lighting and solar energy collection systems.

Sharing Arrangements: Arrangements for use of the laboratory by other institutions and their students can be made through the Graduate School of Architecture.

Robert Bliss, Dean, Graduate School of Architecture, University of Utah, Salt Lake City, Utah 84112.

COMPUTER AIDED DESIGN LABORATORY (22)

Arizona State University

The laboratory contains 250 square feet of laboratory space including graphic digital terminals. Printers and plotters augment available hardware. The laboratory has an extensive catalog of on-line computer software relating to architecture sciences, planning, landscape and design applications, mainly for use by the students in the college and the university.

Sharing Arrangements: If possible, by individual arrangement with the facilities coordinator, and approval of the dean of the college.

Nelson Greene, Coordinator, Computer Aided Design Laboratory, College of Architecture, Arizona State University, Tempe, Arizona 85281.

COMPUTER GRAPHICS LABORATORY (23)

University of Utah

The laboratory is equipped to provide development of low-cost computer graphics for architectural applications. An interface for connection to the University computing systems exists for extensive computing needs.

Sharing Arrangements: The laboratory is available for use by other institutions and their students. Arrangements can be made through the Graduate School of Architecture.

Robert L. Bliss, Dean, Graduate School of Architecture, University of Utah, Salt Lake City, Utah 84112.

ENVIRONMENTAL CONTROL LABORATORY (24)

Arizona State University

The laboratory contains approximately 3,000 square feet of multi-level laboratory space. Included in the laboratory is a 14'x14'x14' room which can be manipulated for dimensional variability as well as for sound, visual effect, temperature, humidity, air flow, odor, and seating pressues and textures.

Sharing Arrangements: By individual arrangement with the facilities coordinator.

Hugh Burgess, Coordinator, Environmental Control Laboratory, College of Architecture, Arizona State University, Tempe, Arizona 85281.

HISTORIC ARCHITECTURE (25)

Fort Wright College

The Fort Wright Historic District contains more than 20 buildings constructed between 1899 and 1932. The District includes distinctive architecture (late Georgian), with brick and wood construction. These were originally officers' homes on an old army base. Some buildings have been restored, some are in less adequate condition.

Sharing Arrangements: Advanced architecture students might make arrangements to visit the campus and design renovation/restoration plans for a building. Photographing and studying buildings could be arranged.

John Jones, Plant Supervisor, Fort Wright College, West 4000 Randolph Road, Spokane, Washington 99204.

SOLAR ENERGY HOME (26)

University of Colorado, Boulder

The House of Essentials is a house retrofitted with a variety of solar energy systems.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dennis Holloway, Associate Professor of Environmental Design, University of Colorado, Boulder, Boulder, Colorado 80309.

3. Area and Ethnic Studies

ASIA COLLECTION (27)

University of Hawaii, Manoa

This collection contains materials from and about south, east and southeast Asian countries in both Western and Asian languages. It includes books, microforms, journals, and newspapers.

Sharing Arrangements: Materials may be borrowed or photocopies ordered through interlibrary loan.

Ellen Chapman, Interlibrary Loan, University of Hawaii, Manoa, Hamilton Library, 2550 The Mall, Honolulu, Hawaii 96822.

BLACK STUDIES LIBRARY (28)

University of California, Santa Barbara

The Black Studies Library, located on the second floor, houses over 3,000 books, at least 30 periodical titles, pamphlets, newsclippings and other material pertaining principally to the Black American experience, and some African and Caribbean material. Many subjects are covered in this collection, including history, literature, political science, sociology, biography, the arts, and reference. The Library has its own card catalog which is in part a duplicate of the titles found in the main card catalog on the second floor of the library. The remaining part of the card catalog consists of pamphlets, articles, newsclippings, picture files, Black literature files, and a current periodical index. A full-time librarian and staff assistants are on duty to assist users in finding materials in Black Studies, wherever located throughout the library.

Sharing Arrangements: Materials in this collection do not circulate since it is a beginning reference collection for research topics in all areas of Black Studies. Circulating copies of many items are, however, available in the Main Collection. These are available for checking out in person or through interlibrary loan.

The Black Studies Librarian, Library, University of California at Santa Barbara, Santa Barbara, California 93106.

CANADA HOUSE (29)

Western Washington University

Canada House is a repository for Canadian documents and is operated by the departments of Canadian and Canadian-American Studies.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Robert Monahan, Canada House, Western Washington University, Bellingham, Washington 98225.

CHICANO STUDIES LIBRARY COLLECTION (30)

University of California, Santa Barbara

The Coleccion Tloque Nahuaque, located within the University Library, houses noncirculating materials dealing with the Chicano/Mexican experience in the U.S. The collection includes approximately 5,600 volumes, a serials collection of over 600 titles, a newsclippings file, pamphlet file, and article and poetry files, all of which are accessible through the Coleccion author-title, and subject card catalog. The Coleccion is one of the largest Chicano studies collections in the U.S. Staff includes a full-time reference librarian, senior library assistant, and several student assistants.

Sharing Arrangements: Materials in this unit circulate only on a "special loan authorization" because this is a reference collection for research in all areas of Chicano/Mexican American studies. Circulating copies of much of this collection are available in the main library collection.

Chicano Studies Librarian, University Library, University of California at Santa Barbara, Santa Barbara, California 93106. Telephone: (805) 961-2756 or 2812.

HAWAIIAN/PACIFIC COLLECTION (31)

University of Hawaii, Manoa

The Hawaiian Collection is the largest and most comprehensive collection of published Hawaiiana in the world. It issues Current Hawaiiana, a quarterly bibliography of Hawaiian materials. It is a depository for Hawaii State documents. The Pacific Collection provides research material pertaining to the islands of the Pacific: Melanesia, Micronesia and Polynesia (except Hawaii).

Sharing Arrangements: Specified material may be borrowed or photocopies ordered via interlibrary loan.

Ellen Chapman, Interlibrary Loan, University of Hawaii, Manoa, Hamilton Library, 2550 The Mall, Honolulu, Hawaii 96822.

JEWISH DOCUMENTATION CENTER (32)

University of Judaism

A collection of half a million or more clippings, brochures, pamphlets and other material dating back at least 25 years and and added to daily. The material deals with current issues affecting Jews in any part of the world and is kept current by clipping American, Israeli and European newspapers and magazines. The collection is unique in North America.

Sharing Arrangements: Material is available for research but must be used in the university.

Dr. Louis Shub, Director, University of Judaism Library, University of Judaism, 15600 Mulholland Drive, Los Angeles, California 90024.

MIDDLE EAST LIBRARY (33)

University of Utah

This library collection exceeds 110,000 items, including periodicals, manuscripts and microfilms. There are more than 34,000 volumes in the Arabic section alone and over 700 Islamic documents from the 7th to 11th centuries in a treasured papyri collection. Volumes are available in all the European languages as well as Arabic, Hebrew, Persian and Turkish.

Sharing Arrangements: All but the rare volumes may be borrowed through interlibrary loan.

Dr. Pai-nan Rashid Wu, Assistant Librarian, Middle East Library, University of Utah, Salt Lake City, Utah 84112.

NATIVE AMERICAN RESEARCH BUREAU (34)

University of Arizona

The Bureau of Ethnic Research contains archives (research material, 1955-1969) and information on ethnographic, nutritional, and population studies of Arizona, Mexico and New Mexico reservations. Specifically included are (1) genealogical records (Papago Reservation, Arizona); (2) interviews, research materials, field notes, maps, photos, computer printouts, cards, statistics, final reports, minutes of tribal council meetings; (3) tribal population information (birth/death certificates, hospital records), social and economic surveys of various reservations; (4) publications: newsletters, stencil masters, seminar transcriptions, and drafts of dissertations relating to Indian research.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. William Stini, Head, Department of Anthropology, Room 316, University of Arizona, Tucson, Arizona 85721.

PACIFIC NORTHWEST/SCANDINAVIAN COLLECTION (35)

Pacific Lutheran University

The Nisqually Plains Room, located in the Mortuedt Library, contains research data on Pacific Northwest history and Scandinavian studies.

Sharing Arrangements: Arrangements can be made on an individual basis.

John Huessman, Librarian, Pacific Lutheran University, Tacoma, Washington 98447.

PITCAIRN ISLANDS STUDY CENTER (36)

Pacific Union College

A study center containing books, articles, typescripts, microfilm, artifacts and memorabilia about the Pitcairn Island group in the South Pacific Ocean. About 1,000 pieces are contained in the Center at present.

Sharing Arrangements: Photocopies of materials can be provided but no books are loaned. The Center is open to all during regular library hours.

Mr. Clarence Sietwick, Librarian, Pacific Union College, Angwin, California 94508.

RUSSIAN AND EAST EUROPEAN STUDIES CENTER (37)

University of Oregon

The undergraduate Russian and East European Studies Center, with funding from the U.S. Department of Education and the state of Oregon, focuses on the Soviet Union and the countries of Eastern Europe. It is the only such center in Oregon. The multidisciplinary program of courses and related activities involves faculty members from Russian language and literature, other Slavic languages, political science, history, art history, religious studies, sociology, geography, dance, economics, anthropology, and folklore.

Sharing Arrangements: The Center shares aspects of its program with other universities and local high schools. Outside scholars are invited to campus to teach courses and give guest lectures open to the public. Center staff members give talks, set up workshops, act as consultants, and help initiate or strengthen area studies offerings in high schools.

Professor M. George Zaninovich, Program Director, Political Science Department, University of Oregon, Eugene, Oregon 97403; or Professor Robert Donia, Administrative Office, Department of History, University of Oregon, Eugene, Oregon 97403.

WESTERN COLORADO COLLECTION (38)

Western State College

A collection of 5,000 titles relating to Western Colorado including a section on rapid growth and boom towns.

Sharing Arrangements: Open to the public.

John Garralda, Director of Library Services, Western State College, Gunnison, Colorado 81230.

4. Biological Sciences

AIRFUGE (39)

University of Arizona

The Beckman airfuge can be used to centrifuge microquantities (0.1 ml) of biological macromolecules. The maximum for the high speed airfuge is 165,000g.

Sharing Arrangements: No strict procedures have been set up; collaborative research is possible.

Dr. W. Chiu, Room 246, Biosciences West Building, University of Arizona, Tucson, Arizona 85721.

AQUARIUM (40)

University of Hawaii, Manoa

The Waikiki Aquarium covers 30,000 square feet of exhibit space (museum, living fresh water and marine organisms) occupying 2.3 acres of waterfront land in Kapiolani Park. The Aquarium contains 300+ species of live marine animals including sharks, seals, chambered nautilus, and crustaceans. A year-round program of classes (60-seat classroom) and aquarium-related research are included.

Sharing Arrangements: The Aquarium is open 10:00 a.m. - 5:00 p.m. 7 days a week. Lecture and tours are available for school groups--special tours of support facilities are available by appointment.

Dr. Leighton Taylor, Director, Waikiki Aquarium, University of Hawaii, Manoa, Honolulu, Hawaii 96822.

ARBORETUM (41)

University of Arizona

The Boyce Thompson Southwestern Arboretum contains a collection of both native and introduced plants adapted to a desert environment.

Sharing Arrangements: Anyone interested in desert plants may make arrangements to visit the Arboretum and observe and/or study the desert plants maintained at the facility.

Mr. R. T. McKittrick, Managing Director, Boyce Thompson Southwestern Arboretum, P.O. Box AB, Superior, Arizona 85273.

ARCTIC AND ALPINE FACILITY (42)

University of Montana

The Arctic and Alpine Facility has an extensive collection of recent publications on arctic and alpine ecology.

Sharing Arrangements: Available on loan to students or other programs.

Dr. Charles Jonkel, Arctic and Alpine Facility, Border Grizzly Project, School of Forestry, University of Montana, Missoula, Montana 59812.

BIOLOGICAL FIELD STATION (43)

Pacific Lutheran University

The PLU Biology Field Station, located at Manchester State Park, Washington, encompasses 111 acres of land and approximately one-half mile of beach front on Puget Sound. Habitats available are: grassland, second growth northwest forest, rocky intertidal, mud beach and gravelly beach. An A-frame containing approximately 800 sq. ft. of laboratory space is located at the site with living facilities for groups of about 15 people.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. John L. Main, Biology Department, Pacific Lutheran University, Tacoma, Washington 98447.

BIOLOGICAL FIELD STATION (44)

Claremont University Center

The Robert J. Bernard Biological Field Station of The Claremont Colleges comprises 65 fenced acres of native coastal sage scrub and oak-sycamore woodland. A 1.2 acre lake/marsh was constructed for acquatic studies. The facility is located immediately adjacent to the campuses of The Claremont Colleges. The Station's purpose is teaching and research.

Sharing Arrangements: By arrangement with the Director.

Clyde H. Eriksen, Joint Science Department, The Claremont Colleges, Claremont, California 91711. Telephone (714) 621-8000 ex. 2630 or 2679.

BIOLOGICAL RESEARCH STATION (45)

New Mexico State University

The Montgomery Biological Research Station (Ruidoso) is in a mountain location. There are living accommodations for approximately 20 persons.

Sharing Arrangements: As arranged with the Department of Biology.

Dr. Robert T. O'Brien, Head, Department of Biology, New Mexico State University, Box 3AF, Las Cruces, New Mexico 88003. Telephone (505) 646-3611.

BIOLOGICAL RESEARCH VESSEL (46)

University of Arizona

La Sirena is a 31-foot diesel-powered cruiser.

Sharing Arrangements: Available for part-time use.

Dr. D. A. Thomson, Department of Ecology and Evolution Biology, University of Arizona, Tucson, Arizona 85721.

BIOLOGICAL STATION (47)

University of Montana

The University of Montana Biological Station is located on the east shore of Flathead Lake, the largest natural lake in the western United States, and is adjacent to Glacier National Park and other Federal and State lands which provide pristine habitat for most Rocky Mountain flora and fauna. Five laboratories, including a new, permanently staffed Freshwater Research Laboratory, facilitate year-round research and instruction in the ecological sciences. Limnology is emphasized and supported by a complete inventory of boats and field equipment. A summer academic program involving visiting faculty is offered annually to graduate and undergraduate students.

Sharing Arrangements: Visting research use in all disciplines is encouraged and on-site housing is available. Summer cabins house students and faculty. Costs vary depending on individual situations and research needs.

Dr. Jack A. Stanford, Director, Biological Station, Bigfork, Montana 59911. Telephone (406) 982-3301.

BIOLOGY RESEARCH CENTER (48)

University of San Francisco

The Research Center in Molecular and Cell Biology utilizes three research laboratories fully equipped by NSF through a CAUSE grant. The facility is located in the Harney Science Center on campus. The Center is ideal for undergraduate research projects, and will accommodate up to 15 students.

Sharing Arrangements: Sharing arrangements are possible during the summer and winter months.

Dr. Gary Stevens, Dean, College of Sciences, University of San Francisco, San Francisco, California 94117.

BIOTELEMETRY EQUIPMENT (49)

California State University, Dominguez Hills

This equipment is used for radiotracking of animals. Included are a Tracking Receiver (Panasonic 1090), Heath Grid Dip Meters, NiCad Rechargeable Soldering Iron, needle nose pliers, some electronic parts for transmitter construction, and Q-dope.

Sharing Arrangements: At present limited to specific faculty in the Department of Biology.

Dr. Dave J. Morafka, Department of Biology, California State University, Dominguez Hills, 1000 East Victoria Boulevard, Carson, California 90747.

BOTANIC GARDEN (50)

Claremont University Center

The Rancho Santa Ana Botanic Garden of about 100 acres is a privately endowed and operated research and educational institution affiliated with Claremont University Center. It is devoted to the native plants of California. The herbarium of 700,000 specimens is a national resource center, specializing in plants of western North America, Mexico and the Pacific Basin. The library contains about 25,000 volumes.

Sharing Arrangements: By arrangement with the Director.

Lee Lenz, Director, Rancho Santa Ana Botanic Garden, Claremont, California 91711. Telephone (714) 626-3922.

DESERT RESEARCH CENTER (51)

University of California, Riverside

The Boyd Deep Canyon Desert Research Center is a 15,500-acre desert research and teaching area located on the Colorado Desert of the Greater Sonoran Desert, a unit of the University of California Natural Land and Water Reserves System. The Center includes several communities and habitats of typical desert classification ranging from approximately 400 feet to 8,716 feet elevation on the summits of the Santa Rosa Mountains. The facilities include short and long-range occupancy living quarters for individual researchers and overnight camping facilities for field classes.

Sharing Arrangements: We presently extend facilities on a reservation basis to any qualified research and class group from any educational and/or research organization throughout the world with no charge unless there is an exorbitant demand on our limited utility resources, particularly water and electric power. We also share reports and other published materials with other desert-oriented educational and research organizations throughout the world.

Philip L. Boyd, Director, Boyd Deep Canyon Desert Research Center, c/o the Biology Department, University of California, Riverside, Riverside, California 92521.

ECOLOGICAL PRESERVE AND NATURAL HISTORY MUSEUM (52)

Eastern New Mexico University

The Ecological Preserve is a 75-acre tract of native prairie which has not been disturbed or grazed for 35-40 years. The Natural History Museum contains a collection of invertebrate and vertebrate specimens primarily from New Mexico. Specimens are primarily for ecological and taxonomic research.

Sharing Arrangements: The Preserve and specimens within the Museum are available to personnel from other academic institutions for research purposes.

Dr. A. L. Gennaro, Curator and Professor of Biology, Eastern New Mexico University, Portales, New Mexico 88130.

ECOLOGICAL STUDIES LABORATORY (53)

Eastern Washington University

The Turnbull Laboratory for Ecological Studies is a research and instructional facility on Turnbull Wildlife Refuge, a 17,000 acre preserve just south of Cheney, Washington. The Turnbull lab is well equipped with a wet lab, 2 dry lab areas (microscopy and specimen prep), an acquatics lab, and 3 environmental chambers. Long term objectives of the facility include: (1) researching ecological systems of the unique basaltic scablands; (2) providing a place for coordination of ecological research and educational programs of other concerned agencies; and (3) the education of all citizens in the relationships between their environment and the quality of life.

Sharing Arrangements: Available to qualified researchers, including graduate students, with arrangements to be made on an individual basis.

Dr. Robert L. Carr, Director, Department of Biology, Eastern Washington University, Cheney, Washington 99004.

ELECTRON MICROSCOPE (54)

California State University, Dominguez Hills

The Department of Biology has a small scanning electron microscope (ISI Mini-SEM 5), a sputter coater, and a critical point drying apparatus. A darkroom is available next to the SEM.

Sharing Arrangements: Available for use upon request made to the Department of Biology.

Dr. Laura Robles, Department of Biological Science, California State University, Dominguez Hills, 1000 East Victoria, Carson, California 90747.

ELECTRON MICROSCOPE (55)

University of Colorado, Boulder

The 1 Mev JEM-1000 electron microscope is located within the Department of Molecular, Cellular and Developmental Biology and is designed to examine samples of biological interest. The extreme voltages available make it particularly useful for examining thicker sections in finer detail than otherwise possible. A system of stereo imagery enhances the ability to spatially view and reconstruct cellular systems.

Sharing Arrangements: This facility is supported by the Biotechnology Resources Program, Division of Research Resources, National Institute of Health, Bethesda, Maryland 20014. Investigators wishing to use the facility should contact Dr. Suzanne S. Stimler from that office.

Dr. Mircea Fotino, Department of Molecular, Cellular and Developmental Biology, Campus Box 347, University of Colorado, Boulder, Boulder, Colorado 80309.

ELECTRON MICROSCOPE (56)

University of Arizona

The High Resolution JEM100CX transmission electron microscope is modified for low dose technique. The microscope is suitable for studying the molecular structure of biological materials by low dose microscopy. The facility also includes an optical diffractometer for quality analysis of electron micrographs.

Sharing Arrangements: No strict procedures have been set up; collaborative research is possible.

Dr. W. Chiu, Room 246 Biosciences West Building, University of Arizona, Tucson, Arizona 85721.

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ENTOMOLOGICAL MUSEUM (57)

New Mexico State University

This collection of approximately 50,000 specimens, mostly from the Chichuahuan Desert, is particularly strong in the family colepotera.

Sharing Arrangements: As arranged with the Department of Biology.

Dr. James Zimmerman, Department of Biology, New Mexico State University, Box 3AF, Las Cruces, New Mexico 88003. Telephone (505) 646-4324.

ENVIRONMENTAL FIELD STATION (58)

Pacific University

The Malheur Field Station consists of land and buildings with facilities used for instruction in the unique environment of the Harney Basin of Southeastern Oregon and the surrounding area.

Sharing Arrangements: The Field Station has been shared with a consortium of colleges and universities in Oregon. The Station can accommodate up to 200 students for summer courses.

Dr. David R. Malcolm, Dean, College of Arts and Sciences, Pacific University, Forest Grove, Oregon 97116.

ENVIRONMENTAL STUDIES CENTER (59)

San Francisco State University

The Tiburon Center for Environmental Studies serves as a base for a multidisciplinary approach to the solution of Bay Area environmental problems by monitoring and modeling the physical, economic, social and cultural variables involved. To realize this goal, the center participates with departments on campus to offer courses on the site and provide field and research support for classes taught on campus.

Sharing Arrangements: There are opportunities for faculty and graduate students to participate in research on the site.

Dr. Erwin Seibel, Director, Tiburon Center for Environmental Studies, P.O. Box 855, Tiburon, California 94920.

ENVIRONMENTAL STUDIES LABORATORY AND LIBRARY (60)

University of Montana

A laboratory and library facility for determining impacts of selected physical or toxic gases and elements in plant and animal tissues. Includes both University and field studies facilities (i.e., field laboratory has 60' x 12' trailers) to study impacts of toxic elements to terrestrial ecosystems including domestic and indigenous animals.

Sharing Arrangements: Currently being shared with graduate students conducting independent research projects and could be shared with other principal investigators from other institutes.

C. C. Gordon, Botany Department, University of Montana, Missoula, Montana 59812.

EVOLUTION COLLECTION (61)

University of California, Santa Barbara

The Darwin Evolution collection contains 2,000 volumes.

Sharing Arrangements: The Collection is available during regular Special Collections hours (8-5 Monday-Friday and some evenings and weekends). Most books and all manuscripts must be used in the library.

Christian Brun, Head,, Department of Special Collections, Library, University of California, Santa Barbara, Santa Barbara, California 93106.

FIELD STATION (62)

Eastern Oregon State College

The Wallowa Mountain Field Station is located at 4,500 feet elevation near the southern edge of the Eagle Cap Wilderness Area 55 miles southeast of LaGrande. It is used primarily for instruction in natural sciences, anthropology, and the arts, and secondarily as a base for field research. Facilities include a laboratory, dining hall, and three bunk houses with capacity for 25 persons.

Sharing Arrangements: As space permits, arrangements can be made for individuals and other institutions to use the Station for research and instruction.

Director, Wallowa Mountain Field Station, School of Arts and Sciences, Eastern Oregon State College, LaGrande, Oregon 97850.

FRESHWATER MARSH RESERVE (63)

University of California, Irvine

The San Joaquin Freshwater Marsh Reserve is located near the campus of the University of California, Irvine. The facility encompasses 200 acres and is used for both research and teaching. The facility consists of a number of separate ponds with diverse flora and fauna. The marsh is located on the Pacific Flyway, and therefore contains a diversity of bird species during migratory periods.

Sharing Arrangements: Scholars and graduate students from educational institutions may address the representative listed below for information on the possibility of using the marsh for teaching or research projects.

Norman M. Weinberger, Acting Dean, School of Biological Sciences, University of California, Irvine, Irvine, California 92717.

HERBARIUM (64)

Pacific Lutheran University

The herbarium houses approximately 6,000 specimens.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. John L. Main, Biology Department, Pacific Lutheran University, Tacoma, Washington 98447.

HERBARIUM (65)

University of Wyoming

The Rocky Mountain Herbarium is a growing collection of some 350,000 preserved Rocky Mountain, arctic, and subalpine plant specimens, plus 50,000 mycological specimens (primarily parasitic) constituting the W. G. Solheim Collection.

Sharing Arrangements: Open to qualified researchers without restriction during the academic year (late August to mid-May) and normal hours (8:00 a.m. to 5:00 p.m.) or by special arrangement during the summer months. Specimen loans can be arranged through the institutional representative.

Ron Hartman, Curator, Rocky Mountain Herbarium, Box 3165 University Station, University of Wyoming, Laramie, Wyoming 82071.

HERBARIUM (66)

New Mexico State University

Collection of native plants representative of the southwestern United States and northern Mexico.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Richard Spellenberg, Department of Biology, New Mexico State University, Box 3AF, Las Cruces, New Mexico 88003. Telephone (505) 646-3732.

HERBARIUM (67)

University of Arizona

The University of Arizona Herbarium contains approximately 225,000 pressed dried specimens of plants that primarily grow in Arizona and northwestern Mexico. Each plant specimen is identified and labeled.

Sharing Arrangements: Researchers interested in studying the specimens may make arrangements by contacting the institutional representative listed below.

Dr. C. T. Mason, University of Arizona Herbarium, 113 Agricultural Sciences Building, University of Arizona, Tucson, Arizona 85721. Telephone (602) 626-2107.

LASER FACILITY (68)

University of California, Irvine

The Laser Microbeam Program (LAMP) is a facility designed to provide investigators with the equipment and technical expertise for cellular microsurgery, fluorescence analysis, and computer image and enhancement analysis. The equipment available consists of several kinds of lasers providing a number of irradiating wavelengths, ultra-violet microscopes, and supporting computer interface for image analysis. Laser wavelengths from 217nm - 700nm are available from three neodymium-VAG pumped tunable dye laser systems.

Sharing Arrangements: Scholars and graduate students from other institutions are welcome to use the LAMP facility. Cost will depend upon the investigator's need for equipment and technical assistance. The facility is funded by the NIH-Biotechnology Resource Program. It is a "National User Facility" and is governed by the rules of that program.

Michael W. Berns, Director, LAMP, School of Biological Sciences, University of California, Irvine, Irvine, California 92717.

MARINE BIOLOGY INSTITUTE (69)

Hawaii Institute of Marine Biology

The Hawaii Institute of Marine Biology has the capability to keep subtropical marine animals in a wide range of aquaria and pens. It has a good sea water system, and a wide range of cages, pens, and ponds for working with living subtropical marine species.

Sharing Arrangements: Available to the international scientific community on a project by project basis. Qualified scientists should contact the Director of the Institute.

Dr. Philip Helfrich, Director, Hawaii Institute of Marine Biology, P.O. Box 1346, Kaneohe, Hawaii 96744.

MARINE BIOLOGY INSTITUTE (70)

University of Oregon

The Oregon Institute of Marine Biology is located in a setting providing access to an unusual variety of richly populated marine and terrestrial habitats. A full program of graduate study is offered. Special programs for undergraduate studies are offered in the fall, spring and summer. Research facilities are available throughout the year.

Sharing Arrangements: Arrangements for sharing of facilities should be made through the Institute Director.

Dr. Paul P. Rudy, Director, Oregon Institute of Marine Biology, University of Oregon, Eugene, Oregon 97403.

MARINE BIOLOGY RESEARCH CENTER (71)

University of San Francisco

Facilities in the Research Center in Field Marine Biology include a field van, small boats with outboard motors and camping equipment for 15 students. A permanent study site has been established on the Northern California coast for intertidal and subtidal studies. Other facilities include a collection of marine algae and invertebrates, a wet lab, a cold room and 6 refrigerated marine aquaria.

Sharing Arrangements: Sharing arrangements are possible for the summer and winter months.

Dr. Gary L. Stevens, Dean, College of Sciences, University of San Francisco, San Francisco, California 94117.

MARINE LABORATORY (72)

Western Washington University

The Leona M. Sundquist Marine Laboratory includes labs, lecture room, research spaces, and more than 50 seawater tanks. The site includes 73 wooded acres and a small lake. The Laboratory is used by those researching Puget Sound marine, freshwater and terrestrial environments.

Sharing Arrangements: The Laboratory is administered by Western Washington University on behalf of a consortium of colleges and universities.

Dr. Charles J. (Jerry) Flora, Sundquist Marine Laboratory, Western Washington University, Bellingham, Washington 98225.

MARINE SCIENCE CENTER (73)

Oregon State University

The Oregon State University Marine Science Center, located in Newport, Oregon, contains approximately 60,000 square feet of seawater laboratories, office and support facilities. Raw seawater (from Yaquina Bay intakes) as well as filtered and pathogen free seawater is available in various quantities for research projects. Support facilities include analytical labs and equipment (chemistry, physiology).

Sharing Arrangements: Arrangements are made on a space available basis to units of Oregon State University, sister institutions and cooperating state and federal agencies. User fees are charged to non-Oregon State System of Higher Education agencies.

Dr. Lavern Weber, Director, Oregon State University Marine Science Center, Newport, Oregon 97365.

MARINE SCIENCE INSTITUTE (74)

University of California, Santa Barbara

The Marine Science Institute maintains several wilderness areas for marine research and teaching: (1) Carpinteria Salt Marsh Reserve (more than half of an estuary that contains 230 acres of an important habitat for certain plants, invertebrates, fishes and water birds); (2) Coal Oil Point Reserve (a protected area of coastal sand dunes with flora, fauna and rare species); (3) Santa Cruz Island Reserve (a unique and undisturbed environment capable of accommodating up to 18 persons on the largest, most topographically diverse part of the California Channel Islands); and (4) Valentine Eastern Sierra Reserve (187 acres in two separate areas, containing natural and artificial stream channels, fish ponds, high montane chaparral and Great Basin sagebrush). Complete descriptions of each facility are available from the Marine Science Institute.

Sharing Arrangements: Arrangements can be made on an individual basis.

Shirley Clarke, Marine Science Institute, University of California, Santa Barbara, Santa Barbara, California 93106.

MARINE STATION (75)

Walla Walla College

The Walla Walla College Marine Station is a new marine station with modern teaching and research facilities located on 40 acres of beach adjacent to Deception Pass State Park. A full summer teaching program and a year-round research program are offered. A fully equipped saltwater system is available.

Sharing Arrangements: Students from other institutions are welcome. Two universities are currently sending students and instructors.

Dr. Donald W. Rigby, Director, Walla Walla College Marine Station, Anacortes, Washington 98221.

MICROCINEMATOGRAPHY EQUIPMENT (76)

University of Arizona

Equipment includes a time lapse phase-contrast microscope, associate microcinematography apparatus and rate controllers. It is suitable for bacterial analysis.

Sharing Arrangements: The facility can be used on a time available basis.

Dr. N. H. Mendelson, Room 425, Ag Sciences Building, University of Arizona, Tucson, Arizona 85721.

MICROSCOPY AND PHOTOGRAPHY LABS (77)

University of Oregon

The facilities contain several special laboratories and darkrooms with Phillips, Siemens and Hitachi transmission electron microscopes and an AMR scanning electron microscope. Special optics facilities with ZEIS photomicroscopes, equipped with Nomarski interference phase optics and time-lapse cinemicrography equipment are available.

Sharing Arrangements: Arrangements for sharing facilities and equipment are to be made through the head of the Department of Biology.

Dr. Aaron Novick, Head, Department of Biology, University of Oregon, Eugene, Oregon 97403.

MOLECULAR BIOLOGY INSTITUTE (78)

University of Oregon

The Institute of Molecular Biology is a facility for research and research instruction in areas of biology where phenomena can be understood in terms of the structure of molecules.

Sharing Arrangements: Arrangements can be made by contacting the Institute Director.

Dr. Peter von Hippel, Director, Institute of Molecular Biology, University of Oregon, Eugene, Oregon 97403.

MOUNTAIN RESEARCH STATION (79)

University of Colorado, Boulder

The Mountain Research Station is a field research and teaching facility located 41 km west of Boulder on the eastern slope of the Colorado Front Range at 2925 m elevation. The MRS, administered by the Institute of Arctic and Alpine Research (INSTAAR), consists of a complex of buildings including 29 two-person summer cabins, 7 winterized family cabins, a winterized shower and laundry facility, classrooms, summer dining hall, various support buildings, and the winterized Alpine Laboratory.

Sharing Arrangements: Faculty, graduate students, and qualified investigators should make arrangements on an individual basis.

Patrick J. Webber, Director, INSTAAR, University of Colorado, Boulder, Campus Box 450, Boulder, Colorado 80309.

NATIONAL PARK SERVICE RESEARCH CENTER (80)

University of Wyoming

The University of Wyoming--National Park Service Research Center is a long established research facility and unique science conference center located in Grand Teton National Park, 3 miles north of Colter Bay. Seasonal operation is from May 15 to October 15 with laboratories, library and living accommodations for 20-30 researchers. Conference and seminar facilities will accommodate approximately 100 people.

Sharing Arrangements: Formal proposals and applications for monetary support for conducting basic and applied investigations in the biological, physical and social sciences are required. Evaluations of proposals are based on scientific merit, timeliness and appropriateness to National Park areas. Details on scientific conferences may be obtained from the Director.

Kenneth L. Diem, Director, University of Wyoming--National Parks Service Research Center, Box 3166, University Station, Laramie, Wyoming 82071. Telephone (307) 766-4227 or 4207.

NATURAL HISTORY MUSEUM (81)

Idaho State University

The Idaho Museum of Natural History has significant research collections in archaeology (200,000) vertebrate paleontology (50,000), botany (55,000) and ethnography (6,000). The Stirton-Kelson research library contains 14,000+ reprints in zoology and paleontology.

Sharing Arrangements: Contact curator in charge of individual collection, or write Director.

Mrs. Lucille Harten, Idaho Museum of Natural History, Box 8096, Idaho State University, Pocatello, Idaho 83209.

NATURAL HISTORY MUSEUM (82)

University of Puget Sound

The James R. Slater Museum of Natural History has a collection of 50,000 specimens of birds, mammals, reptiles, amphibians, plants and fossils. It is the most complete museum of natural history in the Northwest.

Sharing Arrangements: Arrangements can be made on an individual basis--museum hours for visitors are by appointment.

Ellen Kritzmann, James R. Slater Museum of Natural History, University of Puget Sound, 1500 North Warner, Tacoma, Washington 98416. Telephone (206) 756-3189.

NATURAL PRESERVE (83)

California State University, Dominguez Hills

This 18-acre Natural History Preserve was established in 1971 to preserve an example of the rapidly disappearing "natural" grassland communities of the Los Angeles basin. The rich flora and fauna of the preserve are important resources in teaching field biology and provide opportunities for faculty and student research in the urban setting. The self-guided Nature Trail increases the utility of the preserve to the surrounding communities.

Sharing Arrangements: Available for use upon request made to the Department of Biology.

Dr. Dallas Colvin, Department of Biological Science, California State University, Dominguez Hills, 1000 East Victoria, Carson, California 90747.

NATURAL RESERVES (84)

University of California, Riverside

The University of California, Riverside, has administrative responsibility for seven natural reserves, which are part of the University of California Natural Land and Water Reserves System. The seven administered by the Riverside campus are: Philip L. Boyd Deep Canyon Desert Research Center (16,616 acres), Granite Mountains Reserve (1,850 acres), Sacramento Mountains Reserve (591 acres), Motte Rimrock Reserve (237 acres), Box Springs Reserve (160 acres), Eitwanda Wash Reserve (157 acres) and the James San Jacinto Mountains Reserve (30 acres).

Sharing Arrangements: Specific arrangements vary according to the facility and accommodations available. Generally, facilities are used by many educational institutions other than the University of California, primarily for field classes on a short-term visitation basis.

Dr. Wilbur W. Mayhew, Director, The Department of Biology, University of California, Riverside, Riverside, California 92521.

NUCLEAR MAGNETIC RESONANCE FACILITY (85)

University of California, Davis

The Nuclear Magnetic Resonance Facility houses major scientific instruments used in health sciences and physical sciences research; specifically, the facility contains a 200 MHz Fourier Transform Nuclear Magnetic Resonance Spectrometer and a 500 MHz Nuclear Magnetic Resonance Spectrometer.

Sharing Arrangements: Available to the general public on a recharge basis.

Professor E. M. Bradbury or Professor G. La Mar, Nuclear Magnetic Resonance Facility, Chemistry Department, University of California, Davis, Davis, California 95616.

OCEAN STUDIES CONSORTIUM (86)

California State University, Dominguez Hills

The Southern California Ocean Studies Consortium (SCOSC) is a consortium of six California State University and Colleges campuses in or near the greater Los Angeles area. Member campuses include California State University, Dominguez Hills, Fullerton, Los Angeles, Long Beach, Northridge and Pomona. Equipment and facilities include a fully crewed 50 foot vessel, the R.V. NAUTILUS, a Boston whaler with outboard and trailer and a large inventory of biological collecting gear: nets, dredges, trawls, grabs, corers, etc. and a more limited array of physical and chemical monitoring gear. The NAUTILUS is slipped at Golden Shore in Long Beach harbor and is suitable for ocean cruises from 1/2 to several days duration and most sampling or collecting procedures. A smaller vessel is equipped with a hand winch and is suitable for inshore marine work in protected waters and most fresh water applications.

Sharing Arrangements: Vessels and equipment are available at nominal fees to consortium members and at extremely reasonable rates for nonmember use. Individual faculty or students interested in participating or observing ongoing teaching or research use of SCOSC facilities are often welcome--at the discretion of the captain and faculty in charge.

Director, SCOSC, P.O. Box 570, 925 Harbor Plaza, Long Beach, California 90801.

OPTICAL DIFFRACTOMETER (87)

University of Arizona

The Optical Diffractometer can be used for quality analysis of electron micrographs.

Sharing Arrangements: No strict procedures have been set up; collaborative research is possible.

Dr. W. Chiu, Room 246, Biosciences West Building, University of Arizona, Tucson, Arizona 85721.

PRIMATE RESEARCH CENTER (88)

Eastern Washington University

The Primate Research Center affords the opportunity for the investigation of four monkey species. The Primate Research Center is housed within the Regional Primate Research Center Field Station at Medical Lake, Washington, about 10 miles from the University campus. The Center sponsors interdisciplinary biomedical research projects, especially those concerned with reproduction, social behavior, prematurity, and alcohol ingestion. A unique resource is the primate alcohol laboratory. A social group of Pigtail macaques have been voluntarily consuming alcohol-solutions for a period of five years. This laboratory provides an opportunity to study the behavioral, biochemical, genetic, and cognitive attributes of a very unique population of nonhuman primates. Suitable control animals are also avalible.

Sharing Arrangements: Faculty and students interested in using the Center are encouraged to contact the Director of the Center.

Dr. Robert Elton, Director, Primate Research Center, Eastern Washington University, Cheney, Washington 99004.

RESEARCH INSTITUTE (89)

University of Montana

The Stella Duncan Memorial Research Institute consists of a combination of laboratories, offices, equipment and facilities dedicated to research on basic immunology and problems of allergy and chronic bronchial asthma.

Sharing Arrangements: The Institute is located within the Microbiology Department and is used by graduate and undergraduate students. Active collaboration with clinicians and health-service industries is also available.

Dr. Jon A. Rudbach, Director, Stella Duncan Memorial Research Institute, University of Montana, Missoula, Montana 59812.

SCIENCE FIELD CAMPUS (90)

San Francisco State University

The J. Paul Leonard Sierra Nevada Science Field Campus of San Francisco State University provides a mountain setting for instruction and research in the environmental sciences and other creative disciplines. It is located in the north-central Sierra Nevada on the north fork of the Yuba River at an altitude of 5,500 feet. A variety of mountain and desert communities are easily accessible from the field campus. Summer courses, weekend seminars, and field trips can be comfortably accommodated on a year-round basis in this historical Mother Lode Country of Tahoe National Forest.

Sharing Arrangements: Available to all California State University campuses and to the public.

Dr. V. Thomas Parker, Sierra Nevada Field Campus, Star Route, Satterly, California 96124 (summer) or Department of Biological Sciences, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132.

SEA-GOING RESEARCH VESSEL (91)

San Jose State University

The Moss Landing Marine Laboratories have a 79-foot RV CAYUSE capable of a wide variety of biological, geological, and physical oceanographic work. The vessel operates primarily along the central California coast, but longer cruises can be scheduled. It accommodates 8 scientists.

Sharing Arrangements: Available to NSF grant holders with approved shiptime without charge; available to other users at current rates.

Dr. John Martin or Ms. Allyson Mallory, Moss Landing Marine Laboratories, P.O. Box 223, Moss Landing, California 95039.

SEA-GOING RESEARCH VESSEL (92)

California State University, Northridge

This vessel contains scientific equipment designed to obtain biological samples from various water depths and the ocean floor. It has applications in marine biology, geology, invertebrate zoology, and physiological ecology.

Sharing Arrangements: Access is provided through the Southern California Ocean Studies Consortium, the research and educational coordinating facility for marine programs of six California State University campuses in the Los Angeles area.

Dr. Earl Segal, Professor of Biology, California State University, Northridge, 18111 Nordhoff Street, Northridge, California 91330.

SEA-GOING RESEARCH VESSEL (93)

Occidental College

The Vantuna is an 85-foot 99-ton vessel, with a 3,000 mile range that can sleep a scientific party of 10. It is equipped for collection of biological materials and physical data. The Vantuna will accommodate up to 42 students on day trips.

Sharing Arrangements: The Vantuna is presently shared with institutions in Southern California. It is operated as a nonprofit research facility.

John S. Stephens, Jr., Director, Vantuna Program, Department of Biology, Occidental College, 1600 Campus Road, Los Angeles, California 90041.

STOP ACTION PROJECTOR AND COMPUTER-INTERFACED GRAPHICS CALCULATOR (94)

University of Arizona

Equipment includes an image analysis bench plus 16mm movie and 35mm slide projectors to facilitate quantitative measurements with the graphics calculator. Contour length area, or digitized (X and Y) data obtained from images may be transferred to a North Star Horizon II computer for analysis.

Professor, N. H. Mendelson, Room 425, Ag Sciences Building, University of Arizona, Tucson, Arizona 85721.

SYSTEMATIC BIOLOGY MUSEUM (95)

University of California, Irvine

The Museum of Systematic Biology conducts teaching and research on local (Orange County) and regional (Southern California, Baja California, Mexico) populations of plants, invertebrates, and vertebrates.

Sharing Arrangements: Scholars and graduate students from other institutions may address the representative noted below for information on the possibility of arranging to utilize this facility.

Gordon Marsh, Director, Museum of Systematic Biology, University of California, Irvine, Irvine, California 92717.

VERTEBRATE MUSEUM (96)

Pacific Lutheran University

This vertebrate museum houses approximately 5,000 specimens.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. John L. Main, Biology Department, Pacific Lutheran University, Tacoma, University 98447.

VERTEBRATE MUSEUM (97)

New Mexico State University

This vertebrate collection is maintained by the Biology Department and includes reptiles and amphibians (5,000 specimens), birds (1,500 specimens), and mammals (10,000 specimens). These collections represent primarily fauna of southwestern United States and are available to qualified users on campus or by loan.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Charles Thaeler, Department of Biology, New Mexico State University,
Box 3AF, Las Cruces, New Mexico 88003. Telephone (505) 646-4519.

5. Business and Management

CAPITAL MARKET RESEARCH CENTER (98)

University of Oregon

The Center for Capital Market Research sponsors, supervises, and coordinates research projects exploring important characteristics of equity and debt instruments, markets in which these instruments are traded, institutions dealing with these instruments, and investment strategy and evaluation. In addition, it undertakes applied contract research projects in finance for national and local governmental units.

Sharing Arrangements: Sharing arrangements can be made by contacting the director of the Center.

George G. Kaufman, Director, Center for Capital Market Research, College of Business Administration, University of Oregon, Eugene, Oregon 97403.

INNOVATION CENTER (99)

University of Utah

The Innovation Center is an experimental program sponsored by NSF aimed at fostering the formation and development of new technical business enterprise. A two quarter course entitled Innovation and Entrepreneurship is offered to advanced level students in engineering and business. Direct assistance is offered to carefully seleted technical entrepreneurs to aid them in developing companies based on new products.

Sharing Arrangements: Service is available to inventors throughout the Intermountain area. Entrepreneural education is available for students throughout the West.

Dr. Wayne S. Brown, Director of the Innovation Center and Professor of Mechanical Engineering, University of Utah, Salt Lake City, Utah 84112.

INVENTION AND INNOVATION CENTER (100)

University of Oregon

The Experimental Center for the Advancement of Invention and Innovation provides a program whereby ideas and inventions submitted by the public can be evaluated and researched by students. This Center is funded by the National Science Foundation and is one of three in the nation.

Sharing Arrangements: Sharing arrangements can be made by contacting the director of the Center.

Gerald G. Udell, Director, Experimental Center for the Advancement of Invention and Innovation, College of Business Administration, University of Oregon, Eugene, Oregon 97403.

PRODUCTIVITY INSTITUTE (101)

Arizona State University

This facility was established by private grants and business contributions to assist businesses in increasing human productivity. Extensive library facilities in the field of productivity measurement and improvement are available.

Sharing Arrangements: Professors interested in projects relating to productivity measurement and improvement may become associated for limited periods with this administrative unit of the College of Business Administration.

Dr. Thomas P. Fullmer, Director, Productivity Institute, College of Business Administration, Arizona State University, Tempe, Arizona 85281. Telephone (602) 965-7626.

TRANSPORTATION STUDIES INSTITUTE (102)

University of California, Irvine

The Institute of Transportation Studies at Irvine is a branch of the statewide Institute headquartered on the University of California, Berkeley campus. The Institute conducts federal and state-funded research and training in transit management, transit performance evaluation, transit labor relations and transportation systems evaluation. The Institute publishes the results of research and sponsors a certificate program in Management of Transportation Programs and Systems as well as conferences and seminars.

Sharing Arrangements: The Institute maintains an outstanding research library on urban transportation and provides customized information services to any individual or organization conducting research in this area. Manual and computer-based research services are also available; users are recharged for the cost of the computer service.

Dr. G. J. (Pete) Fielding, Director of Programs, Institute of Transportation Studies, or Mrs. Lyn Long, Information Specialist, Institute of Transportation Studies, University of California, Irvine, Irvine, California 92717.

TRAVEL REFERENCE CENTER (103)

University of Colorado, Boulder

The Travel Reference Center, housed in the Business Research Division of the University, is the library for the Travel and Tourism Research Association. The Reference Center was established to assist the travel industry in finding information sources and to provide a facility to house and keep up-to-date a complete collection of travel studies. The Reference Center serves as a tool for research and is available to TTRA members without charge and to others for a fee.

Sharing Arrangements: Arrangements will be made on an individual basis.

Charles R. Goeldner, Director, Travel Reference Center, University of Colorado, Boulder, Boulder, Colorado 80309.

6. Education

CAREER EDUCATION CENTER (104)

University of Montana

The National Center for Career Education (NCCE) is the national repository of all career education instructional materials. The Center disseminates career education materials, programs, and practices to institutions across the nation. NCCE operates a computer search and retrieval system for retrieval of materials and information upon request.

Sharing Arrangements: NCCE provides access to materials and information upon request. NCCE has existing internship programs for students.

Dr. Vincent Barry, National Center for Career Education, University of Montana, Missoula, Montana 59801.

CONFERENCE CENTER (105)

University of Wyoming

The Trail Lake Ranch Conference Center is a 25-acre facility immediately adjacent to wilderness and other public lands in the Wind River Range, near Dubois in northcentral Wyoming. Facilities include accommodations for up to 100 persons in 25 sleeping cabins, with a large classroom/lodge, lounge, office, dining room and full support services. Self-supporting, the Center is within 90 miles of Yellowstone National Park and provides an excellent setting for educational/recreational activities.

Sharing Arrangements: The Center is available to any educational program. Specific arrangements can be made through the institutional representative listed below. The Conference Center is operational from late May through late August.

Charles P. Cooper, Coordinator, Conferences and Institutes, University of Wyoming School of Extended Studies, Box 3274, University Station, Laramie, Wyoming 82071.

CONFERENCE CENTER (106)

Arizona State University

The Arizona State University Conference Center at Castle Hot Springs is a desert-mountain retreat operated exclusively on the American plan. The

165-acre facility is located 65 miles from the main campus and can accommodate 80 persons for conferences, seminars, or other continuing education activities. Four hundred eighty thousand gallons of pure, crystal clear mineral water at a temperature of 125 degrees F flow from the hot springs during each 24-hour period.

Sharing Arrangements: Deeded to the Arizona State University Foundation, the Conference Center at Castle Hot Springs is scheduled and administered through the Office of University Continuing Education.

Denis J. Kigin, Dean, University Continuing Education, Arizona State University, Tempe, Arizona 85281.

DEAF AND HEARING IMPAIRED RESOURCE CENTER (107)

Oregon College of Education

The Regional Resource Center for the Deaf and Hearing Impaired was established in 1973 in cooperation with the Department of Health, Education and Welfare to provide information and training to professionals serving the deaf in Oregon, Washington, Idaho, and Alaska. Direct service to deaf persons, parents and professional groups is available in the form of workshops, in-service training programs, personal, vocational and educational counseling, and parent counseling and consultations.

Sharing Arrangements: Arrangements will be made on an individual basis.

John Freeburg, Oregon College of Education, 345 North Monmouth, Monmouth, Oregon 97361.

EVALUATION, DISSEMINATION AND ASSESSMENT CENTER (108)

California State University, Los Angeles

A bilingual/bicultural educational center providing teaching materials for kindergarten through college. Materials are published in twelve languages.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. Charles Leyba, School of Education, California State University, Los Angeles, Los Angeles, California 90032.

HUMAN PERFORMANCE LABORATORY (109)

Arizona State University

The laboratory has the following equipment/capabilities: Graphic tablet digitizer used with a computer to perform high-speed film analysis; automated conversion of graphic to numeric data; hydrostatic determination of body composition.

Sharing Arrangements: Qualified scholars may request consideration for use on a second priority basis. Unqualified persons may contract with the Laboratory for small projects.

Lee N. Burkett, Director, Human Performance Laboratory, Department of Health and Physical Education, Arizona State University, Tempe, Arizona 85281.

HUMAN PERFORMANCE LABORATORY (110)

University of Montana

The Laboratory contains special equipment (treadmills, bicycle ergometers) to study acute and chronic effects of exercise.

Sharing Arrangements: The Laboratory has a cooperative research agreement with the U.S. Forest Service. Other sharing arrangements can be made by contacting the director of the Laboratory.

Dr. Brian Sharkey, Director of Human Performance Laboratory, University of Montana, Missoula, Montana 59812.

INFANT AND CHILD CENTER (111)

Oregon College of Education

The Teaching Research Infant and Child Center is organized around five coordinated units: (1) the National Model Center for Early Childhood Education of Handicapped Children (model classroom serving 10-15 handicapped children between the ages of 3 to 6); (2) the National Model Center for Education of Severely Handicapped Children (model classroom serving 8-12 children in one or more functional areas, e.g., mental, physical, sensory and/or emotional); (3) the Infant and Toddler Classroom (serves children between the ages of 1 to 3, some of whom are handicapped); (4) the Parent Training Clinic (provides diagnostic and prescriptive educational services to families of children with learning and behavioral problems); and (5) a group home for handicapped children, ages 7 to 16.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. William Moore, Chairman, Department of Special Education, Training Research, Monmouth, Oregon 97361.

JEWISH EDUCATION CENTER (112)

University of Judaism

A part of the Department of Education of the University of Judaism, the Center for Innovative Jewish Education (CIJE) evaluates material available for Jewish schools, reports on innovative teaching techniques, curricula and other developments of interest to teachers in Jewish day schools or afternoon schools. The CIJE also publishes occasional newsletters and carries out research projects. Examples of the latter include one on how to deal in the classroom with the TV series "Holocaust" and another on the motion picture "Oh God."

Sharing Arrangements: Depending on the request. Material is available at the university and printed material can be obtained on request.

Dr. Ronald Wolfson, Director, Center for Innovative Jewish Education, University of Judaism, 15600 Mulholland Drive, Los Angeles, California 90024.

MATH/SCIENCE RESOURCE CENTER (113)

Mills College

The Math/Science Resource Center is the clearinghouse and switchboard of the Math/Science Network. The Network is an association of 600 scientists, educators, parents and business people established in the San Francisco Bay Area to promote participation of women in math and science and nontraditional occupations. The Resource Center at Mills coordinates Network activities locally and nationally, collects and disseminates information and materials on scientific and technical education and careers, and provides referrals of role-model speakers.

Sharing Arrangements: By calling the Resource Center at (415) 635-5074 arrangements can be made to utilize the Center and learn of its activities.

Jan MacDonald, Coordinator, Math/Science Resource Center, Mills College, Oakland, California 94613.

MULTI-CULTURAL EDUCATION PROGRAM (114)

Fort Wright College

Fort Wright College's multi-cultural teacher education program is one of 13 programs in the nation which have been chosen by the American Association of Colleges of Teacher Education as model programs for a case study publication. The program is primarily involved with Native Americans and foreign students.

Sharing Arrangements: Visitors are welcome to see how the multi-cultural teacher education program operates. It includes satellite campuses in Indian-run centers on the Yakima and the Colville Reservations. Leaders on the faculty and administration who are involved with multi-cultural teacher education at Fort Wright are also available for workshops and as consultants.

Anis Quidwal, Dean of Graduate Programs, Fort Wright College, West 4000 Randolph Road, Spokane, Washington 99204.

SPORTS MEDICINE LABORATORIES (115)

Chapman College

This facility supports a new master's program in sports medicine. The human performance laboratory includes: stress study treadmill and ECG monitoring system, metabolic measurement cart (gas analysis), submersion tank (body composition analysis), and bicycle ergometers. The training room includes: Cybex II dual channel isokinetic dynamometer, Cybex digital work integrator, Lumex Kinetron, Cybex power testing and work measurement systems, and microtherm diathermy unit. Graduate students assist with fitness evaluation and programming of students and others utilizing the laboratory services.

Sharing Arrangements: Equipment and resources could feasibly be shared with institutions interested in sports medicine programs.

Monte Smith, Athletic Trainer, Physical Education Department, or Marge Murphy, Exercise Physiologist, Physical Education Department, Chapman College, Orange, California 92666.

7. Engineering

DIGITAL IMAGE ANALYSIS LABORATORY (116)

University of Arizona

This is a major laboratory unit of the College of Engineering and consists of lab, secretarial and office space, plus the following equipment: PDP-11/70 computer with 128,000 words of memory, floating-point arithmetic, four time-sharing terminals and remote dial-up service; 67 M bytes of high-speed magnetic disk storage; 9-track, 800 BPI magnetic tape drive; a Stanford Technology Corp. image display unit with: 512 x 512 x 8 bits per pixel x 3 colors per pixel refresh memory, precision CRT monitor, arithmetic/logic unit integrated into refresh memory. The computer and display system are accessible from two major image processing software packages, SADIE (general purpose image processing), and X500 (interactive image processing).

Sharing Arrangements: Jointly used by funded activities in remote sensing, optical sciences, and the Engineering College. Arrangements for outside individuals and groups will be made on an individual basis.

B. R. Hunt, Professor, University of Arizona, Tucson, Arizona 85721.

ELECTRON MICROSCOPE FACILITIES (117)

New Mexico Institute of Mining and Technology

Included are complete preparation facilities and 2 scanning and 3 transmission electron microscopes. Scanning E.M. has analytical attachment for elemental analysis. TEM operating voltages to 200 kV, SEM to 30 kV, 2 RCA TEMS (100 kV), Hitachi H.V. 200F TEM (200 kV) Hitachi S-310, Hitachi HSS-2R SEM (30 kV) + ORTEC 6000 X-ray analyzer.

Sharing Arrangements: Sharing is on a time available basis. Interdisciplinary or interinstitutional research is by special arrangement. Special arrangements can be made through the New Mexico Tech Research Foundation or Research and Development Division.

L. E. Murr, Professor and Head, Department of Metallurgical and Materials Engineering, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801.

ELECTRO-OPTICAL CALIBRATION FACILITY (118)

Utah State University

This facility includes direct analog-to-digital sensor data acquisition and data processing. Calibration uncertainties are determined, in part, based upon the consistency of the data itself. The facility includes a low-scatter chamber for off-axis response measurements in the visible, and cryogenically cooled distant small-area and extended area sources for ir sensor characterization.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. C. L. Wyatt, Electro-Dynamics Laboratories, Utah State University, Logan, Utah 84322.

ENERGY, ENVIRONMENT, AND PUBLIC POLICY CENTER (119)

Colorado School of Mines

The Boettcher Reading and Reference Center for Energy, Environment, and Public Policy is located in the Arthur Lakes Library, Colorado School of Mines, Golden, Colorado. It is a special center containing books and periodicals related to energy, environment, and public policy matters.

Sharing Arrangements: Available to any student or faculty member of an institution of higher education, with proof of identificaton (Colorado only). Other states, interlibrary loan.

Mr. Hartley K. Phinney, Jr., Director of the Library, Colorado School of Mines, Golden, Colorado 80401.

ENVIRONMENTAL ENGINEERING RESEARCH LABORATORY (120)

University of Arizona

Facilities for standard and advanced analysis of water and wastewater. Equipment includes gas chromatograph, atomic absorption spectro-photometer, total organic carbon analyzer and Warburg respirometer.

Sharing Arrangements: Water and wastewater treatability studies available on contract basis.

Paul H. King, Professor and Head, Department of Civil Engineering, University of Arizona, Tucson, Arizona 85721.

FLUIDIZED BED REACTOR (121)

Arizona State University

A fluidized bed reactor for gasification of biomass input followed by a Fischer-Tropsch type fluidized bed catalytic reactor and a conventional catalytic reformer to form liquid fuels.

Sharing Arrangements: Must be operated by our personnel under a negotiated arrangement. Ideally suited for evaluating various biomass materials for their potential fuel content and for their compatability with reactor design.

H. William Welch, Director, Center for Research or James L. Kuester, Professor, Center for Research, Arizona State University, Tempe, Arizona 85281.

GEO-HEAT CENTER (122)

Oregon Institute of Technology

An applied research center to further the use of low temperature geothermal waters in direct heat applications by providing commercialization and technical assistance to seven western states. Contains aquaculture and greenhouse facility for research in geothermal waters.

Sharing Arrangements: Information on the use of low temperature geothermal waters available to scientists and others.

Paul J. Lienau, Director, Geo-Heat Center, Oregon Institute of Technology, Oretech Branch Post Office, Klamath Falls, Oregon 97601.

GRAPHICS LABORATORY (123)

University of Arizona

The Interactive Graphics Engineering Laboratory includes a D.G. Eclipse S/230 minicomputer with 224 kw of core, a 200 MB Disk Drive, MAP 6400 Array Processor, 5 storage tube graphics terminals, digitizing equipment, 2 hard copy units, 10 computer terminals, Ramtek Color Graphics units, Color Graphic Photographic System, Calcomp 620 Plotter, Dual Density MAG tape, and 2 floppy disk drives. Software is available for some applications.

Sharing Arrangements: Accounts may be established at the Interactive Graphics Engineering Laboratory by any university or outside organization. Charges are billed monthly. Access to computer and specialized software may be accomplished by telephone at 300 bauds.

Dr. Hussein A. Kamel, Director, Interactive Graphics Engineering Laboratory, University of Arizona, AME Department, Building #16, Room 210A, Tucson, Arizona 85721.

HIGHWAY MATERIALS RESEARCH LABORATORY (124)

University of Arizona

Equipment includes: (1) Schweyer Constant Stress Rheometer-measurements of viscosity range 1.6-1010 Pascal seconds; (2) Vibratory Kneading Compactor for specimen diameters of 51-460 mm and height of 25-200 mm; (3) constant stress flexure fatigue tester for specimens 460 mm in diameter and height of 25-75 mm; (4) dynamic modulus of elasticity under repeated loading through a double-punch procedure.

Sharing Arrangements: To be used in-house under cost-sharing arrangements or on a contract.

R. A. Jimenez, Professor of Civil Engineering, University of Arizona, Tucson, Arizona 85721.

MICROCAMPUS (125)

University of Arizona

The Microcampus is an educational delivery system using video techniques to make University classes available to students anywhere, at their time convenience. Developed in the College of Engineering, it now includes courses from Business, Liberal Arts and Mines. Remote students may register for classes in absentia and earn regular University credit. Videotaped short courses provide up-to-date information on diverse subjects not for University credit. The facility consists of two classrooms and a control room equipped to produce candid, videotape recordings of on-going UA classes. Regular courses rent for $2,000. Short courses rent for $65 per tape; sell for $150 per tape.

Sharing Arrangements: Arrangements will be made on an individual basis.

Eileen M. Matz, Director, Microcampus, University of Arizona, 206 Civil Engineering Building, Tucson, Arizona 85721.

MINE (126)

University of Alaska, Fairbanks

On 520 acres, 17 miles northeasterly of the campus is an underground silver, gold, lead, and zinc mine that the University's School of Mineral Industry has been using for instructional purposes for the past five years. The facility, which includes about 700 feet of tunnel, is now being acquired by the University of Alaska. Instruction and associated research is given in topics such as geochemical and geophysical exploration, underground techniques of drilling, blasting, loading and haulage and ground support, mine ventilation, mine surveying and geological mapping.

Sharing Arrangements: Arrangements will be made on an individual basis.

Earl H. Beistline, Dean, School of Mineral Industry, University of Alaska, Fairbanks, Fairbanks, Alaska 99701.

MINE (127)

University of Arizona

The San Xavier Experimental Mine is a three-level underground shaft mine located 25 miles southwest of Tucson, Arizona. The mine is in development at the present time, but does have several equipped work places for various mining, engineering, and geological engineering experiments, and for geologic mapping.

Sharing Arrangements: The user must meet safety training standards set by the department and must cover operating expenses for the mine. The level of such expenses would be determined by the activity being pursued, but in most cases would be nominal.

Professor Jay C. Dotson, Acting Head, Department of Mining and Geological Engineering, College of Mines, University of Arizona, Tucson, Arizona 85721.

MINE (128)

Colorado School of Mines

Located in Idaho Springs, Colorado, this experimental mine is an "underground classroom" for CSM mining engineering students. Known in its producing days as the Edgar Mine, it now is a training ground in preparing students in mining techniques. Some research in testing equipment and in determining underground radiation is now being done. Suitable for research projects where an underground site is required.

Sharing Arrangements: Individual agreements and fee subject to negotiation, time of year, and educational use of the facility.

Dr. Thys Johnson, Head, Department of Mining Engineering, Colorado School of Mines, Golden, Colorado 80401.

MINING RESEARCH CENTER (129)

New Mexico Institute of Mining and Technology

John D. Sullivan Center for In-Situ Mining Research consists of four 27,000 gal. (10' x 40') insulated stainless steel tanks which can be instrumented to leach and monitor up to 190 tons of ore or raw materials. The center includes a test site laboratory and monitoring station.

Sharing Arrangements: Sharing arrangements are dependent on time and facility availability. Interdisciplinary and interinstitutional research is encouraged. Cost will be negotiated for individual projects.

L. E. Murr, President, New Mexico Tech Research Foundation, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

NUCLEAR REACTOR AND ASSOCIATED LABORATORIES (130)

University of Arizona

Steady state power (100 kw maximum) and pulse operation (720 Mw peak pulse power) nuclear reactor with several irradiation facilities and radiation detection laboratories for high resolution gamma ray spectroscopy and delayed neutron counting for uranium and thorium assay.

Sharing Arrangements: Facility is made available for classes from other institutions (Arizona State University and Pima Community College) on an "as available" basis. Other arrangements possible depending on conditions.

R. L. Seale, Head, Department of Nuclear Engineering, University of Arizona, Tucson, Arizona 85721.

PIPELINE RESEARCH LABORATORY (131)

Montana State University

Pipeline test facility consisting of a 2,600 ft. closed loop of 8.625 inch diameter pipe, powered by a 150 horsepower d-c motor with variable speed controller giving 0-2000 rpm includes a 10-inch centrifugal pump; and complete flow monitoring capabilities. The laboratory has been used for coal slurry and wood-chip pipeline transport tests.

Sharing Arrangements: No formal arrangement exists; projects may be conducted by staff at MSU or facilities may be used.

Dr. William A. Hunt, Civil Engineering and Engineering Mechanics, Montana State University, Bozeman, Montana 59715

SOLAR ENERGY COLLECTION (132)

Arizona State University

In 1970, the International Solar Energy Society officially donated its research collection to the Hayden Library at Arizona State University. Since that time, Arizona State University has continued to acquire new materials so that it houses one of the most extensive solar collections in the world. Included are books, periodicals, conference proceedings, government documents, and a large number of unbound technical papers. The emphasis is on terrestrial solar thermal and photovoltaic applications of solar energy. Access to the material is provided through the Solar Energy Index published by Pergamon Press.

Sharing Arrangements: Circulating publications and photocopies of noncirculating publications may be obtained through interlibrary loan. The Solar Energy Collecton is open to the public.

George Machovec, Solar Energy Librarian, Arizona State University Library, Arizona State University, Tempe, Arizona 85281.

SOLAR ENERGY RESEARCH EQUIPMENT (133)

Arizona State University

A platform of approximately 7,000 square feet on the top of one of our buildings is designed for the testing of flat plate and concentrating solar collectors without interference for the sun's rays. Instrumentation for logging data and measuring various conditions prevailing at the time of the experiment is available. Special test beds exist for testing photovoltaic or thermal receivers up to about 1,000 suns of intensity.

Sharing Arrangements: To be negotiated depending upon the nature of the experiment.

Dr. H. William Welch or Dr. Charles E. Backus, Center for Research, Arizona State University, Tempe, Arizona 85281.

SOLAR ENERGY TEST FACILITY (134)

University of Arizona

Located on the roof of the Civil Engineering Building on the University of Arizona campus, this facility supports research-related testing of solar collectors and systems. It features a digital data acquisition system, which also functions as a central monitoring point for a variety of local evaluation and assessment projects, and two sizes of high-concentration solar furnaces (500 and >5000 sun). A wide range of fixed and portable sensing equipment is available, and a public information service is provided.

Sharing Arrangements: Arrangements may be made to use the facility for research or instructional purposes by qualified investigators of other universities and appropriate industrial organizations. Tours can also be arranged and technical information provided by telephone. In cases of special research interest monitoring services can be provided locally.

Dr. T. Triffet, Associate Dean, College of Engineering, University of Arizona, Tucson, Arizona 85721.

STRUCTURAL ENGINEERING RESEARCH LABORATORY (135)

University of Arizona

The Structural Engineering Research Laboratory includes a 24' x 40' structural testing floor, Riehle-Los Fatigue Machine and 200,000 Pound Tinius-Olsen Universal Testing Machine.

Sharing Arrangements: Facilities available for use on a contract basis.

Ralph M. Richard, Professor, Department of Civil Engineering, University of Arizona, Tucson, Arizona 85721.

SURVEYING AND PHOTOGRAMMETRY EQUIPMENT (136)

California State University, Fresno

Extensive equipment holdings in both conventional and electronic distance measurement and in photogrammetry.

Sharing Arrangements: Arrangements will be made on an individual basis.

James Matheny, Dean, School of Engineering, California State University, Fresno, Fresno, California 93740.

VEHICLE RESEARCH INSTITUTE (137)

Western Washington University

The Institute conducts an on-going program of research in vehicle design, construction, and engineering. The Vehicle Research Institute has gained international recognition in the areas of fuel economy, aerodynamic design, and engine development.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. Michael Seal, Technology Department, Western Washington University, Bellingham, Washington 98225.

WAVE RESEARCH FACILITY (138)

Oregon State University

The Oregon State University Wave Research Facility is 110 meters long, 4 meters wide, and 5 meters deep and has a moveable floor and beach. A hydraulically activated wave board can generate random waves for waves up to 1.6 meters in height and breaking. The flume is fully instrumented and has a PDP 11 data acquisition system and several peripherals. A towing carriage on the basin also facilitates towing tests.

Sharing Arrangements: The basin is available for use by private organizations and university and government organizations when it is not in use for Oregon State University research. Fees for such use are: Nonacademic use $1,000 for 1 day, $1,800 for 2 days, $800 per day for 3 or more days. When work has academic significance for Oregon State University personnel--$500 a day with a 3-day minimum.

Dr. John H. Nath, Director, Environmental Fluid Dynamics Laboratories, Department of Civil Engineering, Oregon State University, Corvallis, Oregon 97331.

WIND TUNNEL LABORATORY (139)

University of Colorado, Boulder

A description was not provided by the institution.

Sharing Arrangements: Sharing arrangements are unknown.

William Pietenpol, Dean, College of Engineering and Applied Science, University of Colorado, Boulder, Boulder, Colorado 80309.

8. Fine and Applied Arts

AFRICAN ART EXHIBIT (140)

Pacific Lutheran University

The exhibit contains more than a dozen works of primitive African art.

Sharing Arrangements: Arrangements can be made on an individual basis.

John Heussman, Librarian, Pacific Lutheran University, Tacoma, Washington 98447.

AMERICAN MUSIC RESEARCH CENTER (141)

Dominican College

This specialized reference library contains 4,000 items plus an extensive sheet music collection. Included are rare early psalters and tunebooks, California Mission music, an unique collection of 18th Century Comic Operas, and 2,000 slides. Equipment includes listening facilities, a piano, and microfilm and microfiche readers. The purpose of the Center is the preservation and study of forgotten and unknown American music covering four centuries.

Sharing Arrangements: The Center is open to all music scholars. Lectures on and off campus can be arranged.

Sister M. Dominic Ray, Director, AMRC, Dominican College, San Rafael, California 94901.

ART COLLECTION (142)

Reed College

This is a moderate sized collection of 20th century paintings, drawings, and prints. The largest institutional collection of the works of Hilda Morris and Carol Morris is included.

Sharing Arrangements: Consult chairman of the art department.

Scott Sonniksen, Assistant Professor of Art, Art Department, Reed College, 3203 S.E. Woodstock Boulevard, Portland, Oregon 97202.

ART COLLECTION (143)

University of California, Davis

The Baird Archive of California Art contains the personal research files of Dr. Baird covering all aspects of 19th and 20th century art: painting, drawing, graphic art, sculpture, and architecture. A research section includes essays on California art in general. There is also a large catalog collection arranged chronologically to document important exhibitions of California art. Individual artists are represented in over 300 separate alphabetically arranged file folders.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library,
University of California, Davis, Davis, California 95616.

ART EXHIBITION CATALOG COLLECTION (144)

University of California, Santa Barbara

The Art Exhibition Catalog Collection of the Arts Library of the University of California at Santa Barbara consists of over 33,000 exhibition catalogs and approximately 7,500 auction catalogs. By utilizing computerized cataloging, various detailed indices are produced. Computer produced indices include the following information: (1) name of the exhibiting agency or museum; (2) place of exhibition (city, country); (3) title of the exhibition catalog; (4) five separate subject headings used to describe and clarify the contents of the catalog; (5) the year of exhibition; (6) data on the inclusion of bibliography, chronology, or bibliographic footnotes; (7) name of the author or compiler. The two principal indices are the Agency Index and the Subject List. Updates are periodically produced.

Sharing Arrangements: Catalogs in the collection are available through interlibrary loan. Indices are published on microfiche by Somerset House: Catalogs of the Art Exhibition Catalog Collection of the Arts Library, University of California at Santa Barbara.

Felipe Cervera, Supervisor, Art Exhibition Catalog Collection, Arts Library, University of California at Santa Barbara, Santa Barbara, California 93106.

ART GALLERY (145)

University of Colorado, Boulder

The University of Colorado Art Galleries are operated by the Department of Fine Arts and consist of three interconnected spaces totaling 5,000 square feet. Contemporary and historical exhibitions organized by the

Galleries (including shows from the Permanent Collection of the Fine Arts Department) are presented, and the program serves the community at large as well as the University. The Galleries are located in the Sibell-Wolle Fine Arts Building. The Permanent Collection, housed and administered by the Fine Arts Department, consists of approximately 3,000 art works in all media and is especially strong in old master, modern and contemporary works on paper.

Sharing Arrangements: The Permanent Collection is open to scholars and museums for study and research by appointment. Works can be borrowed for exhibition, subject to approval of shipping and insurance provisions.

Jean-Edith V. Weiffenbach, Director of Exhibitions and Curator of the Collection, Department of Fine Arts, Box 318, University of Colorado, Boulder, Boulder, Colorado 80309.

LITHOGRAPH PRINTING FACILITY (146)

Arizona State University

A separate studio space, with staff printer, in the art building houses a Tachach-Garfield lithograph press and other necessary equipment for producing lithographs. Facility exists to print editions of lithographs for guest artists, art department faculty and selected students. The facility provides a unique opportunity for students to see established artists creating their work and occasionally collaborate in the printing of editions. The facility will also build a collection of contemporary art for didactic purposes.

Sharing Arrangements: Guests may visit the shop or be invited by the faculty as a guest artist. Works produced in the facility will be available in form of traveling exhibitions to other university art departments/galleries. Technical information will be available on each lithograph produced in the facility.

Dan Britton, Professor and Wayne Kimball, Professor, Department of Art, Arizona State University, Tempe, Arizona 85281.

MUSICAL INSTRUMENTS (MODERN COPIES) (147)

Reed College

Modern copies of historical instruments in this collection include: sackbutt, krummhorn, zink, recorder, and rauschpfeif.

Sharing Arrangements: Arrangements will be made on an individual basis.

John E. H. Hancock, Director, Collegium Musicum, Reed College, 3203 S.E. Woodstock Boulevard, Portland, Oregon 97202.

MUSIC COLLECTION (148)

Mills College

Darius Milhaud taught at Mills for thirty years. The Darius Milhaud Collection includes manuscripts, printed scores, theses, books, and articles by and about Milhaud. Some source materials are included as well as a complete listing of all his works.

Sharing Arrangements: Depends on rarity of requested item. Scores can be reproduced at 10 cents a page plus postage (this is done after requesters sign an agreement not to use the material for commercial purposes).

Eva Kreshka, Mills College Library, Mills College, 5000 MacArthur Boulevard, Oakland, California 94613.

PERFORMING ARTS COLLECTION (149)

University of California, Davis

This collection contains materials on American and British theatre including clippings, photographs, letters, programs, posters, engravings, and acting editions. Collections related to the careers of Sir Henry Irving, Dame Ellen Terry, and actor-managers E. L. Davenport and McKee Rankin are included. The Living Theatre, the Universal Movement Theatre Repertory and the San Francisco Mime Troupe are represented. There is a collection related to the Abbey Theatre from 1904-1961 as well as Erte designs for the Folies Bergere.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

PHOTOGRAPHY CENTER (150)

University of Arizona

The Center for Creative Photography is an archival and exhibition facility of museum stature containing major collections of 19th and 20th century photographs and related archival materials.

Sharing Arrangements: Persons interested in access to the Center should contact the director.

James Enyeart, Director, Center for Creative Photography, University of Arizona, Tucson, Arizona 85721.

PIANO RESOURCES PROJECT (151)

California State University, Dominguez Hills

The Extended Piano Resources Project contains more than 350 scores and 30 recordings of solo and ensemble music featuring prepared piano.

Sharing Arrangements: Arrangements can be made on an individual basis.

Mr. Richard Bunger, Professor of Music, California State University, Dominguez Hills, 1000 East Victoria Street, Carson, California 90747.

PRINTING COLLECTION (152)

University of California, Santa Barbara

The Skofield Printers Collection consists of volumes and manuscripts on the history of printing including examples of fine printing.

Sharing Arrangements: The collection is available during regular Special Collection hours (8-5 Monday-Friday and some evenings and weekends). Most books and all manuscripts must be used in the Library.

Christian Brun, Head, Department of Special Collections, Library, University of California at Santa Barbara, Santa Barbara, California 93106.

PRINTING STUDIO (153)

University of Arizona

The Printing Studio is a monoprinting studio.

Sharing Arrangements: Printing Studio is a separately located Department of Art facility made available to faculty and other professional artists for concentrated private printing sessions specializing in the monotype. Artist's obligations include cost of supplies, nominal fee for use of intaglio or relief processes and equipment, and hourly wage for technical and printing assistance.

Lynn Schroeder, Professor, Department of Art, University of Arizona, Tucson, Arizona 85721.

RECORDED SOUND ARCHIVE (154)

University of California, Santa Barbara

The Archival Recordings Collection, which contains approximately 20,000 78 r.p.m. discs issued between 1890 and the early 1950s, provides a great resource for study in the area of opera and vocal performance practices. Access to this collection is being provided through a computerized book catalog separate from the card catalogs. Only 1/4 of the collection is cataloged.

Sharing Arrangements: To be arranged via tape duplication.

Susan Sonnet, Assistant Music Librarian, Arts Library, University of California at Santa Barbara, Santa Barbara, California 93106.

9. Health Professions

BIOMEDICAL ENGINEERING LABORATORY (155)

Arizona State University

This laboratory is equipped with operating tables and instrumentation for various experiments involving heart, kidney and lung functions and chemical analysis of body fluids.

Sharing Arrangements: To be negotiated on the basis of the nature of the experiments to be conducted.

Dr. H. William Welch or Dr. William J. Dorson, Center for Research, Arizona State University, Tempe, Arizona 85281.

CARDIOVASCULAR LAB (156)

University of Oregon Health Sciences Center

The cardiovascular lab specializes in hemodynamic and isolated organ experiments. The lab contains one six-channel Grass Multipurpose polygraph, a tachygraph, a pneumotachygraph and integrator for air flow studies, respirators for large and small animals, a Grass S-8 stimulator, a Beckman blood gas analyzer and Zeromatic pH meter, and other assorted pieces of equipment.

Sharing Arrangements: Three department members (2 cardiovascular, 1 toxicology) are willing to negotiate projects and departmental involvement on an individual basis.

Fred F. Cowan, Chairman, Department of Pharmacology, University of Oregon Health Sciences Center, School of Dentistry, 611 S.W. Campus Drive, Portland, Oregon 97201.

DENTISTRY--CHILD STUDY CLINIC (157)

University of Oregon Health Sciences Center

The Child Study Clinic conducts research on dento-facial growth, oral health, and physical and skeletal growth of healthy children and children with specific genetic disorders. About 350 children have been observed for ten or more years. Each child's record is documented by physical measurements, cephalometric, intraoral, hand and wrist and calf and knee roentgenograms, photographs, dental study casts, and oral examinations.

Sharing Arrangements: Space is available for training of individuals in the Child Study Clinic.

Dr. Bhim Savara, Child Study Clinic, School of Dentistry, University of Oregon Health Sciences Center, 611 S.W. Campus Drive, Portland, Oregon 97201.

DIAGNOSTIC ULTRASOUND UNIT (158)

Washington State University

This is a Unirad B-mode scanner EDP 1,000.

Sharing Arrangements: To be negotiated.

Dr. Norman Rantanen, Veterinary Radiologist, College of Veterinary Medicine, Washington State University, Pullman, Washington 99164.

EQUINE RESEARCH TRACK (159)

Washington State University

The track is a half-mile oval with banked turns. It includes an inside track for vehicles carrying cinematography equipment.

Sharing Arrangements: To be negotiated.

Dr. Barrie Grant, Head, Equine Division, College of Veterinary Medicine, Washington State University, Pullman, Washington 99164.

HARD TISSUE CIRCULATION LABORATORY (160)

University of Oregon Health Sciences Center

This is a laboratory for measurement of blood flow and tissue pressures in teeth and bones of animals. Tissue pressure is measured by microcannulation, blood flow with electromagnetic flowmeters and/or microspheres. The laboratory computer is available for data reduction.

Sharing Arrangements: User must make arrangements to pay for supplies and experimental animals.

Dr. A. C. Brown, Department of Physiology, School of Dentistry, University of Oregon Health Sciences Center, 611 S.W. Campus Drive, Portland, Oregon 97201.

HUMAN TOXICOLOGY CENTER (161)

University of Utah

The Center for Human Toxicology consists of a core of laboratories capable of providing forensic science services, education and training, clinical services and full professional medico-legal services.

Sharing Arrangements: Arrangements can be made for collaboration in all areas.

Dr. Bryan Finkle, Director, Center for Human Toxicology, University of Utah, Salt Lake City, Utah 84112.

LABORATORY DATA REDUCTION CENTER (162)

University of Oregon Health Sciences Center

Equipment includes the laboratory computer, a PDP 11/45 with a 24 K words Core, as well as mag tape, disk, graphic digitizer, and A/D and D/A converters. The computer can run Basic, Fortran, and Macro under RT-11.

Sharing Arrangements: User must make arrangements to pay for use time, supplies and (if necessary) programming.

Dr. A. C. Brown, Department of Physiology, School of Dentistry, University of Oregon Health Sciences Center, 611 S.W. Campus Drive, Portland, Oregon 97201.

MASS SPECTROMETRY (163)

University of California, San Francisco

This bio-organic, biomedical mass spectrometry research resource provides the major array of techniques and expertise in computerized mass spectrometry to study chemical structural elucidation problems, qualitative characterization of complex organic mixtures, and quantitative analysis of specific substances. Included are glass capillary gas chromatography combined with low and high resolution electron-impact mass spectrometry, field desorption and chemical ionization techniques.

Sharing Arrangements: This is a regional and national resource facility with access available for problems of chemical and biomedical interest. Faculty, postdoctorals, graduate students and qualified investigators are able to use the facility. Arrangements for its use are made on an individual basis.

Dr. Alma Burlingame, School of Pharmacy, University of California, San Francisco, San Francisco, California 94143.

NUCLEAR MAGNETIC RESONANCE (164)

University of California, San Francisco

This facility is equipped with 60 Mhz, 100 Mhz, 300 Mhz instruments, a Fourier transform, and multinuclear probes.

Sharing Arrangements: This is a regional resource facility with access available for problems of bio-medical interest.

Dr. Thomas James, School of Pharmacy, University of California, San Francisco, San Francisco, California 94143.

NURSING LEARNING RESOURCES CENTER (165)

Arizona State University

The Learning Resources Center provides laboratory space for simulated learning of psychomotor skills, health assessment skills, and communication-interviewing skills. Audio-visual resources are available for supplementary and independent learning.

Sharing Arrangements: Could feasibly be shared with other baccalaureate and graduate nursing programs in the region during minimal hours when not in use.

Dr. Juanita F. Murphy, Dean, College of Nursing, Arizona State University, Tempe, Arizona 85281.

PHARMACEUTICAL COMPUTER GRAPHICS (166)

University of California, San Francisco

Graphic displays include interactive display and manipulation of molecular structures especially proteins, nucleic acids, and small molecules.

Sharing Arrangements: This is a regional resource facility with access available for problems of bio-medical interest.

Dr. Robert Langridge, School of Pharmacy, University of California, San Francisco, San Francisco, California 94143.

VETERINARY ANATOMY MUSEUM (167)

Washington State University

The facility is housed in the Veterinary Science Complex in a 2,000 sq. ft. room furnished with study tables, X-ray viewers and audio-visual hardware. Specimens on display include skeletons, dissections of entire animals or individual organs, corrosion casts and plastic embedded parts, models and charts. Dissections demonstrate graphically the gross and clinical anatomy of the horse, cow, dog and cat. Additional material from small ruminants, pig, fowl and selected wild species is featured. Most dissections are freeze dried by a method pioneered at Washington State University. Specimens are enclosed in lucite cases, profusely labeled and often color coded.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Robert Worthman, Head, Anatomy Division, Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology, College of Veterinary Medicine, Washington State University, Pullman, Washington 99164.

VETERINARY HISTORY COLLECTION (168)

Washington State University

The collection ranges across almost the entire history of the printed word in the field of veterinary medicine, tracing its evolution from an art to that of a scientific discipline. European works are present, although English language titles predominate. The development of veterinary medicine in America is reflected by the large number of American imprints present, a fair number of which are from the eighteenth and early nineteenth centuries. Manuscript account books of nineteenth century practitioners are present. Photographs, autograph letters and diaries, students' class notes, laboratory notes, and other unpublished material form an important part of the historic archives. The personal and professional papers of distinguished individuals, living and deceased, in the field of veterinary medicine and related areas are also being added, as well as the archives of various professional organizations.

Sharing Arrangements: Arrangements can be made on an individual basis.

John Guido, Head, Manuscripts, Archives and Special Collections, Holland Library, Washington State University, Pullman, Washington 99164.

VETERINARY RESEARCH LABORATORY (169)

Montana State University

The Veterinary Research Laboratory founded in 1929 is housed with the State Diagnostic Laboratory Bureau in Marsh Laboratory (25,000 sq. ft.) located immediately adjacent to the campus on 118 acres of land. The primary mission of the laboratory is to perform basic and applied research studies designed to contribute to a better understanding of the mechanisms of disease processes and ultimately to reduce losses in Montana livestock. The laboratory has the following sections: virology, immunology, bacteriology, parasitology, physiology, biochemistry, electron microscopy and pathology. Specialized facilities and equipment include: a high resolution analytical electron microscope (TEM, SEM, X-Ray dispersive analysis), clinical pathology, histopathology, biomedical photography and illustration, a medium security isolation building (1,580 sq. ft.), experimental large animal pens, a veterinary clinic and a ranch (680 acres) 60 miles northeast of the laboratory.

Sharing Arrangements: Faculty and graduate students are eligible to use the laboratory. There is a nominal charge for use of specialized equipment and materials.

Dr. David M. Young, Director, Veterinary Research Laboratory, Montana State University, Bozeman, Montana 59717.

10. Letters

AVANT-GARDE POETRY AND LITERATURE COLLECTION (170)

University of California, Davis

This collection contains ephemeral and rare titles from such representative writers as Bukowski, Dorn, Duncan, Ferlinghetti, Snyder and Brautigan.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

HOPKINS LITERATURE COLLECTION (171)

Gonzaga University

The Hopkins Collection is the largest special collection of material relating to the Victorian Jesuit poet, Gerard Manley Hopkins. The collection contains more than four thousand items: books, periodical articles, recorded readings, musical settings of the poems, photographs, paintings, documents and facsimiles. Included are works about the poet, his friends, his family, and the places in which he lived and worked.

Sharing Arrangements: Interlibrary Loan with restriction to use within the borrowing library. Use in Crosby Library (Gonzaga University) is restricted to the main reading room under supervision.

Mrs. Ruth Seelhammer, Curator, Hopkins Collection, Gonzaga University, Crosby Library, E. 502 Boone Avenue, Spokane, Washington 99258.

POETRY ARCHIVES (172)

San Francisco State University

The American Poetry Archives houses a collection of approximately 300 video tapes and 1500 audio tapes of poetry readings. Almost all of the tapes were made at San Francisco State over the past 25 years. The Center has received a series of grants from the National Endowment for the Arts to make the video tapes available to off-campus schools and organizations.

Sharing Arrangements: The American Poetry Archives publishes a catalog listing all of their tapes. The Center can be used by the public.

Steve Bassett, Video Editor, or Carla Harriman, Distributor, American Poetry Archives, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132.

POETRY CENTER (173)

San Francisco State University

The Poetry Center is a resource facility which stores books, magazines, audio tapes, and video taped poetry readings. Every semester, the Center sponsors poetry readings by a variety of poets. The Center houses resource materials for writers. The Poetry Center administers the "California Poets in the Schools" program to teach creative writing to students in public and private schools in grades K-12 (funded by the National Endowment for the Arts and the Fleishhacker Foundation).

Sharing Arrangements: The Poetry Center is open to the public.

Frances Mayes, Director or Bernard Gershenson, Assistant Director, Poetry Center, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132.

RADICAL PAMPHLET COLLECTION (174)

University of California, Davis

A collection of over 4,000 pamphlets giving an overview of American radical movements from 1890 through the 1950s. Writings on or by early socialists such as Debs, DeLeon, Petersen, and Norman Thomas are included. Evolution of communist movements in America is traceable through the works of Browder, Dennis, Foster, and Perlo. There are also publications of the CIO and IWW.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

SCIENCE FICTION LIBRARY AND ARCHIVES (175)

Eastern New Mexico University

This collection, which originated with gifts from Jack Williamson, today consists of approximately 5,300 published books, extensive magazine runs of around 6,800 issues covering some 600 titles, and the papers, manuscripts, and correspondence of Jack Williamson, Leigh Brackett, Edmond Hamilton, and duplicate manuscripts of Piers Anthony. The particular strength of the collection is in the magazines, with long runs of such standards as Amazing, Fantastic, Startling, the Wonder group, as well as many fanzines and peripheral and ephemeral titles. The collection is also an SFWA depository.

Sharing Arrangements: Interlibrary loan is available to scholars engaged in research; photocopies may be supplied within copyright limitations. Visiting researchers are most welcome to use both published and archival materials. Prior notification of needs is advisable.

Mary Jo Walker, Special Collections Librarian, Golden Library, Eastern New Mexico University, Portales, New Mexico 88130.

SHAKESPEARE COLLECTION (176)

Southern Oregon State College

The Margery Bailey Renaissance Collection consists of 4,600 volumes on Shakespeare, his writings and his times.

Sharing Arrangements: These books circulate for two weeks, except for rare editions, which can be used only in the library.

Mr. Richard Moore, Director of Library, Southern Oregon State College, Ashland, Oregon 97502.

THESAURUS LINGUAE GRAECAE (177)

University of California, Irvine

The Thesaurus Linguae Graecae is a computer-based data bank of Greek literature from its Homeric beginnings to approximately 600 A.D., as well as the semasiological evaluation and interpretation of the materials in question.

Sharing Arrangements: Scholars and graduate students from other institutions may contact the director for information on arrangements to utilize this facility.

Theodore F. Brunner, Director, Thesaurus Linguae Graecae, University of California, Irvine, Irvine, California 92717.

11. Physical Sciences

ADVANCED INSTRUMENTATION FACILITY (178)

University of California, Davis

The Advanced Instrumentation Facility contains: transmission electron microscope, scanning electron microscope, high resolution gas chromatograph/mass spectrometer, quadrapole gas chromatograph/mass spectrometer, and image analyzing computer. The facility also provides operational training for above.

Sharing Arrangements: Available to the general public on a recharge basis.

Jack Pangborn, Facility for Advanced Instrumentation, University of California, Davis, Davis, California 95616

ANALYTICAL ULTRACENTRIFUGE (179)

Sonoma State University

With supporting rotors, monochrometer and other accessories the analytical ultracentrifuge is used to determine sedimentation rates and molecular weights of biochemical molecules such as proteins and nucleic acids and of large polymoric organic molecules, and can be used to perform experiments with cell-free extracts and organelles.

Sharing Arrangements: Requests from qualified users will be considered.

Dr. Vincent Hoagland, Department of Chemistry, Sonoma State University, Rohnert Park, California 94928. Telephone (707) 664-2331

ATMOSPHERIC PHYSICS LIBRARY (180)

University of Arizona

The Institute of Atmospheric Physics has a library of climatological data for Arizona and Northern Mexico.

Sharing Arrangements: The climatological data is available at a cost of reproduction.

Louis J. Battan, Director, Institute of Atmospheric Physics, University of Arizona, Tucson, AZ 85721.

ATMOSPHERIC RESEARCH AIRCRAFT (181)

University of Wyoming

A Beechcraft King Air Zoot is equipped with a full array of PMS probes, air motion sensing, state parameter instruments, and a computer-directed data system. A Beechcraft Queen Air is equipped with a PMS 2D probe and ASSP, Warren King and Johnson LWC devices, some air motion sensing, state parameter measurements, and a computer-directed data system.

Sharing Arrangements: Arrangements will be made on an individual basis.

Donald L. Veal, Head, Department of Atmospheric Science, Box 3038 University Station, University of Wyoming, Laramie, Wyoming 82071

ATMOSPHERIC RESEARCH LABORATORY (182)

New Mexico Institute of Mining and Technology

The Irving Langmuir Laboratory for Atmospheric Research includes cloud physics and doppler radars, tracking radars, a dense net of electric field meters, 100 rain gauges, rocket launchers, a balloon hanger for launching free and captive balloons, a restricted airspace provided by the FAA, time lapse cameras surrounding the mountain, television transmissions from remote sites, various aircraft capable of penetrating developing thunderclouds, a small computer, line-of-site microwave links to the New Mexico Tech Campus for Data Transmission and Telephone Communication, and various other research tools, plus living and eating space.

Sharing Arrangements: The laboratory is used extensively by New Mexico Tech scientists as well as by visiting researchers from institutions and agencies throughout the world. Many bring some of their specialized equipment with them while others utilize research tools already on hand. Specific arrangements are negotiated.

C. B. Moore, Langmuir Laboratory Chairman and Professor, Atmospheric Physics, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801.

ATOMIC ABSORBTION FURNACE (183)

Montana State University

The constant temperature Atomic Absorbtion Furnace is a unique piece of equipment developed locally for analysis of elements in the environment as well as industrial and biological materials.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. Ray Woodriff, Chemistry Department, Montana State University, Bozeman, Montana 59715

ATOMIC ABSORPTION APPARATUS (184)

Reed College

Instrumentation labs Model 151 and Model 155.

Sharing Arrangements: Arrangements will be made on an individual basis.

J. E. H. Hancock, Chairman, Chemistry Department, Reed College, 3203 S.E. Woodstock, Portland, Oregon 97202

BALLOON LAUNCH FACILITY (185)

University of Wyoming

The balloon launch facility is operated by the University of Wyoming Department of Physics and Astronomy at a site near Laramie Airport. It includes balloon inflation shelter with 22-foot tall doors with outdoor launch pads (asphalt) up to 300 feet, laboratory set-up area, regular power plus 240v 3-phase. Helium is available.

Sharing Arangements: Arrangements will be made on an individual basis.

David J. Hoffmann, Department of Physics and Astronomy, Box 3905 University Station, University of Wyoming, Laramie, Wyoming 82071. Telephone (307)766-6150.

CALORIMETRY FACILITY (186)

Arizona State University

The Calorimetry Facility includes high temperature Calvet-type microcalorimeters for measuring heats of solution, heats of reaction, and heat contents of oxides, minerals, ceramics, and of aqueous solutions at high pressure.

Sharing Arrangements: Qualified scholars may share with approval of the director.

Alexandra Navrotsky, Professor, Department of Chemistry, Arizona State University, Tempe, Arizona 85281

CHEMICAL STRUCTURE ELUCIDATION (187)

Arizona State University

A network of interactive computer programs has been developed to reliably and efficiently assist the chemist in the conversion of chemical and spectroscopic data to the molecular structure of the unknown compound.

Sharing Arrangements: Qualified scholars may share the facility with the approval of the director.

Morton E. Munk, Professor, Department of Chemistry, Arizona State University, Tempe, Arizona 85281

EARTHQUAKE RESEARCH LABORATORY (188)

University of Montana

Located in the Geology Department, University of Montana. The laboratory operates a World Wide Seismograph Station Observatory (6 seismographs) near Missoula and operates two other seismographs in western Montana. Research includes earthquake hazard and tectonics in Montana. The facility also has five portable microearthquake recorders for special earthquake studies in the field. The laboratory has equipment for engineering seismic refraction studies as well as instruments for gravity and magnetic field surveys.

Sharing Arrangements: Data are regularly supplied to National Earthquake Information Services, U.S. Geological Survey, Golden, Colorado. Copies of seismograms and other earthquake data can be made available. Joint projects utilizing microearthquake recorders for earthquake or blast studies are possible.

Anthony Qamar, Department of Geology, University of Montana, Missoula, Montana 59812.

ELECTRON MICROPROBE LAB (189)

University of Hawaii

The lab includes three spectrometers, and a fully automated camera electron microprobe designed for chemical analysis of very small samples. It is capable of analyzing elements with atomic numbers greater than 5 and is the only facility of its kind within the region. Full sample preparation facilities are available.

Sharing Arrangements: Lab is run on recharge basis. Normal charge to users from the University are $40.00 per hour.

Michael Garcia, Hawaii Institute of Geophysics, University of Hawaii, 2525 Correa Road, Honolulu, Hawaii 96822

ELECTRON MICROSCOPE (190)

University of Hawaii

This includes a Cambridge S-410B scanning electron microscope equipped with cathodeluminescence, and EDAX X-ray non-dispersive analyser. The microscope has 70 A (angstroms) resolution from Lab 6 electron gun, dual display and T.V. scan. X-ray analysis is for all elements from carbon up through heavier elements, and has on-line computer data reduction. Laboratory includes all facilities for sample preparation, and experienced technicians.

Sharing Arrangements: The microscope is currently operated as a campus-wide facility through the Hawaii Institute of Geophysics. Outside users are accommodated on a time-available basis, with one week's notice. Outside University of Hawaii users have also used facility with special advance arrangements. Charges are hourly, based on types of analysis and supplies used.

Dr. Stanley V. Margolis, Chairman, Department of Oceanography, University of Hawaii, 2525 Correa Road, Honolulu, Hawaii 96822

ELECTRON MICROSCOPE FACILITY (191)

Arizona State University

The Facility for High Resolution Electron Microscopy includes high resolution transmission electron microscopes (TEM) and scanning transmission electron microscopes (STEM) with microdiffraction and microanalysis. Its specialty is the study of the structures of crystals and their defects with atomic resolution.

Sharing Arrangements: Qualified scientists may request arrangements to use this regional facility.

Dr. Ray Carpenter, Director, Facility for HREM, Center for Solid State Science, Arizona State University, Tempe, Arizona 85281.

ENVIRONMENTAL TEST CHAMBER (192)

Utah State University

No description was provided by the institution.

Sharing Arrangements: Sharing arrangements are unknown.

Dr. Doran J. Baker, Utah State University, Logan, Utah 84322.

GEOLOGY FIELD STATION (193)

University of Montana

The station includes summer classroom, lab space, and dormitory housing on the campus of Western Montana College.

Sharing Arrangements: Interested parties have access to base maps, aerial photos, and the staff of the cooperative field course taught by the University of Montana and Purdue University.

Robert M. Weidman, Director, Department of Geology, University of Montana, Missoula, Montana 59812

GEOPHYSICS AND PLANETARY PHYSICS INSTITUTE (194)

University of California, Riverside

The Institute of Geophysics and Planetary Physics at Riverside is part of a systemwide Organized Research Unit of the University of California. At the Riverside campus primary research emphasis is on gamma ray astronomy, laboratory solar plasma and magnetospheric physics, and geothermal research using geological, geophysical and geochemical methods.

Sharing Arrangements: One Compton double scatter gamma ray telescope designed for low energy (1-20) MeV) gamma ray detection on balloon flights, a comprehensive automated X-ray diffraction analysis system, and a carbonate and silicate mass spectrometer analysis system could possibly be utilized by other institutions performing research in these cases.

Jeff Adams, Management Services Officer, Institute of Geophysics and Planetary Physics, University of California, Riverside, Riverside, California 92521

GLACIOLOGY DATA CENTER (SNOW AND ICE) (195)

University of Colorado, Boulder

The World Data Center-A for Glaciology is one of three international centers serving the discipline. Topics include snow cover, sea ice, fresh water ice, glaciers and ice sheets, and ground ice. The Center archives published and raw data and conducts inventories and workshops. Data sets include historical photographs, ice core and radio-eco sounding data, Great Lakes ice data and DMSP satellite imagery.

Sharing Arrangements: The Center is operated under contract to NOAA-Environmental Data and Information Services. It is open by arrangement to all visitors concerned with snow and ice phenomena. The Center operates under the principles of the International Data Exchange agreements established through the International Council of Scientific Unions. Materials are supplied on a cost-recovery or exchange basis.

Dr. Roger G. Barry, Director, World Data Center-A for Glaciology, University of Colorado, Boulder, Colorado 80302.

HYDRAULICS LABORATORY (196)

Scripps Institution of Oceanography

The laboratory conducts research and experimentation in oceanography and instrument and equipment testing and calibration. Facilities include: 8' x 8' x 150' wind-wave channel with towing capabilities, stratified flow channel, shallow-water wave basin, glass-walled wave channel, sediment transport basin, and deep tank. Wood and machine shop facility, extensive laboratory instrumentation, photographic and electronic equipment, and several computer controlled Data Acquisition Systems are available. Limited assistance with specialized equipment and programming is available.

Sharing Arrangements: Minimal usage fee for various facilities to cover maintenance and labor incurred.

John Powell, Principal Development Engineer, Scripps Institution of Oceanography, La Jolla, California 92093.

HYDROTHERMAL GEOCHEMISTRY LABORATORY (197)

Idaho State University

The hydrothermal geochemistry lab has rocking furnaces and pressure vessels containing isolated inert sample containers for use with corrosive media. This equipment can be used for mineral solubility and synthesis studies as well as studies of gas-solution, gas-solid, solution-solution, and solid-solution equilibria or reactions.

Sharing Arrangements: Research projects proposed for this lab would have to be worked in with ongoing research and would have to include funding appropriate for the laboratory supplies used during the research work.

Charles W. Blount, Chairman, Department of Geology, Idaho State University, Box 8072, Pocatello, Idaho 83209.

LASER LABORATORY (198)

Sonoma State University

Includes Argon-ion and tunable dye lasers.

Sharing Arrangements: Reasonable requests are considered from qualified users.

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Dr. Richard Karas, Department of Physics, Sonoma State University, Rohnert Park, California 94928.

MAGNETIC AND SEISMIC OBSERVATORY (199)

University of Alaska, Fairbanks

The College Magnetic and Seismic Observatory is a self-contained federal agency located on 38 acres in the midst of the University of Alaska, Fairbanks campus. It is run by the Department of the Interior, U.S. Geological Survey, and produces a variety of magnetic and seismic data in analog and digital form. Geomagnetic data is published monthly as an open-file report.

Sharing Arrangements: Arrangements will be made on an individual basis.

John Townshend, Chief, College Observatory, U.S. Geological Survey, Yukon Drive on West Ridge, Fairbanks, Alaska 99701.

MAP AND IMAGERY LIBRARY AND LABORATORY (200)

University of California, Santa Barbara

The Map Collection is world-wide in scope and exceeds 270,000 sheet maps and charts. These consist of topographical, geological, aeronautical, and ocean charts, as well as many other kinds of subject maps. The Imagery Collection, consisting of 200,000 images, is particularly strong in materials covering the South-central coast and tri-county area. Types of imagery in the collection are conventional aerial photographs, high-altitude NASA transparencies, and satellite photographs and scanned images. These materials, along with 2,000 general and subject atlases, support studies in the earth sciences, biology, meteorology, oceanography, history, and the social sciences. Precision equipment for use with the maps and imagery is available in a specialized laboratory. Among the lab's contents are three transferscopes, two Map-O-Graphs, three types of steroscopes, light tables and Color Combiner. All instruments are available for use after proper training. Also available is a complete drafting station and various other items such as an MP-4 Polariod Copy Camera and planimeters. The laboratory has a direct computer link with the Eros Data Center for searching their 6 million image data base.

Sharing Arrangements: The total facility is available to all with preference given to campus users. The Map and Imagery Collections staff provides reference service to closed stack collections, with tours and training given upon request and by prior appointment. Some maps may be obtained through interlibrary loan.

Larry Carver, Head, Map and Imagery Library, Library, University of California, Santa Barbara, Santa Barbara, California 93106. Telephone (805) 961-2779.

MARINE GEOLOGICAL DATA CENTER (201)

Scripps Institution of Oceanography

The data center coordinates the collection and performs the processing, curating, and distribution of navigation, depth, magnetics and seismic profiler data from Scripps cruises. The group produces cruise reports, microfilm of records, track indexes and data plots. The center maintains a multi-disciplinary computerized index of all samples, records, and measurements collected on major expeditions since 1972.

Sharing Arrangements: Records and indexes are available for inspection at the data center archives. Ozalid reproductions of index plots and seismic profiler records are available, as are microfilms (35mm, 100 ft reels) of seismic records. Requestor pays cost of reproduction. Large requests can be handled as personnel time permits.

Stuart M. Smith, Head, SIO Geological Data Center, Mail Code A-023, Scripps Institution of Oceanography, La Jolla, California 92093. Telephone (714) 452-2752.

MARINE LABORATORIES (202)

San Francisco State University

The Moss Landing Marine Laboratories, approximately 100 miles south of San Francisco, offer full-time course work in oceanography, including marine biology, marine geology and other marine sciences for majors in either the biological or physical sciences, whose objectives include further graduate study, teaching the sciences, or research in the marine sciences.

Sharing Arrangements: The Moss Landing Marine Laboratories operate all year as a consortium of six members of the California State University and Colleges: California State University, Fresno; California State University, Hayward; California State University, Sacramento; California State University, Stanislaus; San Francisco State University; and San Jose State University.

Dr. Henry T. Mullins, Director, Moss Landing Marine Laboratories, P.O. Box 223, Moss Landing, California 95039 or Dr. David Mustart, Chairman, Department of Geosciences, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 95132.

MASS-SPECTROMETER LABORATORY (203)

University of Hawaii

The laboratory includes six inch and twelve inch NBS solid-source mass-spectrometers with support facilities.

Sharing Arrangements: Equipment is on loan from NASA. Limited access is provided for appropriate research determinations of elemental abundance and isotopic composition via a recharge account.

John A. Philpotts, Associate Professor, Hawaii Institute of Geophysics, University of Hawaii, 2525 Correa Road, Honolulu, Hawaii 96822.

METALS HISTORY COLLECTION (204)

Harvey Mudd College

The De Re Metallica Library of President and Mrs. Herbert Hoover, a 1,000-volume collection of rare books on mining and metallurgy, was a gift by the Hoover family to the Claremont Colleges. The books were used by the Hoovers in London during the period 1901-1914 to assist them in their famous English translation of Agricola's classic, De Re Metallica. Subjects include early science, alchemy, geology, and mining in the 15th through 19th centuries.

Sharing Arrangements: Open to scholars by appointment.

David Kuhner, Librarian, Harvey Mudd College, Claremont, California 91711.

METEORITE COLLECTION (205)

Arizona State University

The Arizona State University Meteorite Collection contains samples from 1,400 meteorite falls and tektites.

Sharing Arrangements: Samples will be provided for specific investigations by qualified researchers. A request for material should be in the form of a letter including: type of investigation, type of specimen needed, reason for specific specimens, minimum quantities of material necessary for the investigation, previous work and qualifications of investigators, and requests to other institutions for the same or similar specimens. A catalog of material is available.

Professor Carleton B. Moore, Director, Center for Meteorite Studies, Arizona State University, Tempe, Arizona 85281.

NEUTRON ACTIVATION LABORATORY (206)

University of Arizona

The Lunar and Planetary Laboratory maintains a Neutron Activation Analysis Laboratory which is used with the TRIGA reactor in the Nuclear

Engineering Department to determine quantitative elemental abundances present in trace amounts. Sensitivities are generally well below a microgram per grain, and concentrations less than a picogram per gram have been measured. Equipment includes three Ge gamma-ray detectors (one with Compton suppression) and a PDP-1134A computer for data reduction. Samples which may be studied include meteorites, lunar and terrestrial rocks and minerals, biological materials, and archaeological specimens.

Sharing Arrangements: Equipment is available 24 hours a day. A research proposal is required. Current charges are $4.01 per hour.

Dr. William V. Boynton, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721.

NUCLEAR LABORATORY (207)

University of California, Davis

The Crocker Nuclear Laboratory for medium energy nuclear research uses a 76" isochronous cyclotron. Facilities for neutron physics and radioisotope production are available.

Sharing Arrangements: There are charges for beam time, computer time, and general use of the laboratory.

Professor Tom Cahill, Director, Crocker Nuclear Laboratory, University of California, Davis, Davis, California 95616.

NUCLEAR RADIATION CENTER (208)

Washington State University

The Nuclear Radiation Center consists of 1 MW TRIGA-III fueled research reactor; 14-MeV neutron generator, 12000 Ci Co-60 irradiation facility; and large computer-based ND 6620 gamma-ray spectrometer with 5 Ge(Li) detector inputs. Complete facilities for radiochemistry research are available.

Sharing Arrangements: Sharing arrangements in the past have been through the U.S. Department of Energy funded Reactor Sharing Program. Eleven western universities and colleges use the facility for teaching and research assistance.

Dr. Royston H. Filby, Director, Nuclear Radiation Center, Washington State University, Pullman, Washington 99164.

NUCLEAR REACTOR (209)

University of California, Irvine

Nuclear reactor equipment includes: TRIGA Nuclear Reactor-250 Kwatt research reactor, 14 MeV neutron accelerator, 11,000 Ci Cesium-137 Gamma Irradiator, 2 Gamma ray spectrometers (Ge-Li), and a gamma-ray spectrometer (NaI).

Sharing Arrangements: Scholars and graduate students from other institutions may contact the representative noted below for information on the possibility of arranging to utilize this facility.

Dr. George Miller, Reactor Supervisor, Department of Chemistry, University of California, Irvine, Irvine, California 92717.

NUCLEAR REACTOR (210)

Oregon State University

The Oregon State University TRIGA Reactor (OSTR) is the Mark II type of TRIGA reactor equipped with long-life span fuel elements. Presently, the OSTR is licensed for 1 MW steady-state operation and is authorized to pulse to about 2,000 MW. Associated facilities include provisions for radiography studies, high-speed motion radiography studies, pneumatic sample transfer, and rotary sample irradiation racks.

Sharing Arrangements: The OSTR is available to all faculty members on various university campuses under the State System of Higher Education, to private universities, and to various state and federal agencies. Arrangements can also be made to accommodate special programs from laboratories and institutions from outside the state. Special training programs for reactor operations can be arranged to accommodate public or private utilities involved in nuclear power generation.

C. H. Wang, Director, Radiation Center, Oregon State University, 35th and Jefferson, Corvallis, Oregon 97331.

NUCLEAR REACTOR (211)

Reed College

This is a 250 KW TRIGA nuclear reactor. It can perform experiments using thermal neutrons in physics, engineering, chemistry, biology, or medicine. For example, isotope production, activation analysis and training is possible.

Sharing Arrangements: We have a DOE Reactor Sharing contract.

Dr. M. A. Kay, Director, Nuclear Reactor Facility, Reed College, 3203 SE Woodstock Boulevard, Portland, Oregon 97202.

NUCLEAR SCIENCE FACILITY (212)

San Jose State University

This facility has 10,000 sq. ft. of uniquely designed laboratories for nuclear science; the use is interdisciplinary (chemistry, physics, biology, etc.). Equipment available includes: (1) a 128 KB S130 minicomputer, including mag tape and 20 MB disk storage with graphics and associated peripherals; (2) A 10 ci Cobalt 7 meter calibration facility; (3) 4500 ci Cs irradiator; (4) 6 multi channel analyzers; (5) a Beckman gamma counter; (6) various spectrometers and other research equipment too numerous to list.

Sharing Arrangements: Procedures already exist for use of the Facility by students at other California State College and Universities and at the University of California. On a space available basis, opportunities to use the facility also are possible for selected junior college and high school students.

Dr. Ruth P. Yaffee, Coordinator, Nuclear Science Facility, San Jose State University, 125 South 7th Street, San Jose, California 95192.

OBSERVATORY (213)

University of Arizona

The University of Arizona observatory consists of 2.3m and 0.9m telescopes on Kitt Peak Mountain, as well as 1.54m, 1.0m, and 0.7m telescopes in the Catalina Mountains. The multiple mirror telescope observatory operates the unique six mirror telescope on Mt. Hopkins. Specialized equipment including spectrographs, photometers, polarimeters, etc. are available for each of these telescopes.

Sharing Arrangements: These facilities are heavily subscribed by Arizona astronomers. Other astronomers, usually in collaboration with Arizona astronomers and by special arrangement with the Director, also may use these facilities.

Director, Steward Observatory, University of Arizona, Tucson, Arizona 85721.

OBSERVATORY (214)

California State Univesity, Northridge

The San Fernando Observatory contains a 24 inch solar vacuum telescope, a spectroheliograph, video systems, computers, radio and optical telescopes and digital image equipment. Located at Sylmar, California, the observatory is engaged primarily in solar research and education of students.

Sharing Arrangements: Daytime use must be on a non-interference basis. For further information write or call the director.

Dr. Gary Chapman, Director, San Fernando Solar Observatory, California State University, Northridge, Northridge, California 91330.

OBSERVATORY (215)

National Center for Atmospheric Research

Observatory work at the High Altitute Observatory centers on solar and solar terrestrial physics including the astrophysical connection of solar physics. Facilities include equipment for the reduction and analysis of ground-based and space data--including a high speed microdensitometer--and equipment for calibration of solar observing instruments, including a 110 foot vacuum chamber for simulating the space environment of coronagraphs.

Sharing Arrangements: Facilities are available to visitors of HAO, and via specific arrangement for others.

Robert MacQueen, Director, High Altitude Observatory, National Center for Atmospheric Research, Boulder, Colorado 80307.

OBSERVATORY (216)

University of Hawaii

The Mauna Kea Observatory has a 2.2 meter optical telescope, and operates on behalf of NASA a 3m infrared telescope. The University of Hawaii has observing time on a 3.8m UK infrared telescope and a 3.6m Canada-France-Hawaii Telescope. Photographic and photometric equipment is used. The Mees Solar Observatory is used to carry out observations of the sun, using a range of spectroscopic and direct imaging equipment.

Sharing Arrangements: Qualified astronomers can apply for observing time.

Dr. John T. Jefferies, Director, Institute for Astronomy, 2680 Woodlawn Drive, Honolulu, Hawaii 96822.

OBSERVATORY (217)

New Mexico State University

The Tortugas Mountain Observatory is devoted to planetary research while the Blue Mesa Observatory is used primarily for stellar research. Both observatories contain 24 inch telescopes.

Sharing Arrangements: As arranged with the Department of Astronomy.

Dr. Herbert Beebe, Head, Department of Astronomy, New Mexico State University, Box 4500, Las Cruces, New Mexico 88003. Telephone (505) 646-4438.

OBSERVATORY (218)

University of Washington

The Manastash Ridge Observatory contains a 30-inch telescope and associated equipment for photography, photometry, and spectroscopy.

Sharing Arrangements: Arrangements will be made on an individual basis.

Director, Manastash Ridge Observatory, University of Washington, Seattle, Washington.

OBSERVATORY (219)

University of Wyoming

The Elk Mountain Observatory is situated atop Elk Mountain, an isolated peak on the north end of Wyoming's Snowy Range. The laboratory is equipped with a computer-directed data system and a variety of instruments. The facility has living quarters for some six persons.

Sharing Arrangements: Sharing arrangements can be worked out on an individual basis with the University of Wyoming Department of Atmospheric Science.

Donald L. Veal, Department of Atmospheric Science, Box 3038, University Station, University of Wyoming, Laramie, Wyoming 82071.

OBSERVATORY (220)

University of Wyoming

Located some 30 miles from the main campus with year-round access, the 92-inch computer-controlled telescope is optimized for observation in the infrared regions of the spectrum.

Sharing Arrangements: Formal proposals are required. Facilities at site support up to six persons. Some instrumentation is available to outside users. Observing time is awarded on the basis of scientific merit. Costs are negotiated.

David J. Hofmann, Department of Physics and Astronomy, Box 3905, University Station, University of Wyoming, Laramie, Wyoming 82071. Telephone (307) 776-6150.

OBSERVATORY FOR COMETARY RESEARCH (221)

New Mexico Institute of Mining and Technology

The Joint Observatory for Cometary Research contains the following equipment: 16 inch Cassegrain with Digital Echelle Spectrograph; 14 inch Schmidt Camera; and 10 inch Cassegrain with high speed photometer. The location provides an excellent dark sky site.

Sharing Arrangements: Could be used when bright comets are not available for study.

Elliott Moore, Director, JOCR, Department of Physics, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801.

OCEANOGRAPHIC ANALYTICAL FACILITY (222)

Scripps Institution of Oceanography

Instruments at the facility include an X-ray diffractometer for crystal lattice parameter and mineral identification; X-ray spectrometer for qualitative and quantitative analysis of elements above atomic number 12; Atomic Absorption Spectrometer (A.A.) for quantitative determination of elements in solution; heated graphite atomizer (attachment to A.A.) for determinaton of elements in solids with detection limits of 1x1012 grams; amino-acid analyzer; gas chromatograph for separation and identification of molecules in the gas phase; gas chromatograph/mass spectrometer for qualitative separation and analysis of organic compounds; a Nova 1210 mini-computer for data handling; carbon-dioxide analyzer, and a Cambridge S-4 scanning electron microscope for examination of samples at magnifications up to 100,000X enchanced by a depth of field far surpassing the light microscope. Two Siemens electron microscopes, together with freeze-etching and accessory equipment, provide high resolution in the study of ultra-fine structure. The facility offers complete sample-preparaton laboratories, including "wet" chemistry and rock-processing laboratories, a tabletop Olivetti computer, and geological field equipment. The facility's newest instrument is a scanning transmission electron microscope (STEM) with microanalytical capabilities.

Sharing Arrangements: Open to all Scripps Institution of Oceanography and University of California, San Diego personnel on a recharge basis. Outside users must have an operator and pay a slight charge for the operation and overhead.

Ronald T. LaBorde, Supervisor, Analytical Facility, Scripps Institution of Oceanography, A-020 Analytical Facility, La Jolla, California 92093.

OCEANOGRAPHIC DATA FACILITY (223)

Scripps Institution of Oceanography

The Physical and Chemical Oceanographic Data Facility consists of trained personnel and equipment suitable for acquisition and processing of seawater samples; high precision instrumental measurements of temperature, salinity, dissolved oxygen and suspended particulate profiles at sea; analyses of water samples for salinity, oxygen, nutrients, alkalinity, total carbon dioxide, etc.; acquisition and processing of continuous meteorological and sea surface data; data processing and report generation both at sea and ashore.

Sharing Arrangements: Equipment available on a noninterference basis, costs of preparation and deactivation to be responsibility of user. User must have adequate training in use of equipment to minimize risk of loss or damage. Personnel available at times, at cost. Some equipment not available unless deployed or used by Physical and Chemical Oceanographic Data Facility personnel.

R. T. Williams or W. Bryan, Scripps Institution of Oceanography, S-001,
La Jolla, California 92093.

OCEANOGRAPHIC LIBRARY (224)

Scripps Institution of Oceanography

The library's collections in oceanography, marine biology, and undersea technology complement its store of oceanographic information. The 130,000 bound volumes include 6,600 serial titles and extensive expedition literature. The technical reports published by Scripps are supplemented by reports and translations from other educational, governmental, and industrial institutions involved in marine research. The Map and Chart Collection emphasizes nautical information, and is a depository for U.S. Geological Survey geologic maps and related publications.

Sharing Arrangements: The library is open to the public for research, but doesn't offer check-out privileges. Interlibrary loans are available.

William Goff, Oceanographic Library, Scripps Institution of Oceanography,
La Jolla, California 92093.

OCEANOGRAPHIC RESEARCH VESSEL (225)

University of Alaska, Fairbanks

The research vessel ALPHA HELIX is a 133-foot oceanographic vessel, with standard oceanographic sampling equipment, winches, laboratories, and accommodations for 15 scientists.

Sharing Arrangements: The ALPHA HELIX is a member of the University National Oceanographic Laboratory System, and as such there is National Science Foundation funding available for NSF-sponsored research. Other projects must cover the cost of the sea time, except that on a space-available basis ancillary projects may participate in cruises.

Dr. Vera Alexander, Acting Director of the Institute of Marine Science, University of Alaska, Fairbanks, Fairbanks, Alaska 99701.

OCEANOGRAPHIC RESEARCH VESSELS (226)

University of Hawaii

The KANA KEOKI and MOANA WAVE are oceanographic research vessels capable of worldwide operation. One hundred fifty six feet and 175 feet in length, they both can carry a scientific party of up to 15 people. The NOI'I is a 65-foot vessel capable of working in local Hawaiian waters out to 250 miles.

Sharing Arrangements: The University of Hawaii is a member of the University National Oceanographic Laboratory System (UNOLS) and through UNOLS joint scheduling arrangements makes our research vessels available to scientists wanting to do research in the Pacific.

J. Frisbee Campbell, Scientific Coordinator for Marine Operations, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii 96822.

OPTICAL SCIENCES CENTER (227)

University of Arizona

This is a graduate training center in optical sciences with a facility of more than 70,000 square feet, a faculty of 35, and a graduate student enrollment of 127. It includes an unique massive optics shop capable of fabrication of optical elements of diameters up to 6 meters.

Sharing Arrangements: Available to outside groups by specific arrangement.

Dr. Peter A. Franken, Director, Optical Sciences Center, University of Arizona, Tucson, Arizona 85721.

OPTICAL SPECTROMETER (228)

Reed College

This is a Tektronix J20/7J20 rapid-scan optical spectrometer, supported by a Tektronix digital processing oscilloscope and computer data acquisition system (PDP-11/35 with RT-11, version 2B operating system and BASIC interpreter with DPO support). Optical range 300-1100 nm; time scale to 4 msec per 40-nm or 400 nm span.

Sharing Arrangements: On-site use might be scheduled, subject to local instructional or research use of elements of the ensemble.

William D. Weir, Professor Department of Chemistry, Reed College, 3203 SE Woodstock Boulevard, Portland, Oregon 97202. Telephone (503) 771-1112, ex. 258, 418.

PHOTOACOUSTIC SPECTROSCOPY LABORATORY (229)

Arizona State University

Photochemical and photobiological spectroscopic studies with photoacoustic spectrometry are possible in the laboratory.

Sharing Arrangements: Qualified scholars may share with approval of the director.

Thomas A. Moore, Professor, Department of Chemistry, Arizona State University, Tempe, Arizona 85281.

PHYSICAL SCIENCES LIBRARY, TECHNICAL REPORTS COLLECTION (230)

University of California, Davis

This library includes technical reports of the U.S. Department of Energy (DOE, formerly AEC) and the Nuclear Regulatory Commission (NRC). An almost complete set of both the current and retrospective publications of the DOE and NRC are maintained in microformat.

Sharing Arrangements: Interlibrary loan or photoduplication of the individual technical reports.

Scott Kennedy, Head, Physical Sciences Library, The General Library, University of California, Davis, Davis, California 95616.

PHYSICS LEARNING CENTER (231)

University of California, Santa Barbara

The facility contains a large number of demonstrations in mechanics, heat, wave motion, sound, electricity, magnetism, optics and modern physics. Self-contained descriptions of the operation and physical interpretation of each demonstration are posted to help self-paced student observation of phenomena.

Sharing Arrangements: Sharing arrangements can be made on an individual basis.

Anthony Korda, Physics Department, University of California, Santa Barbara, Santa Barbara, California 93106.

PLANETARIUM-OBSERVATORY (232)

Adams State College

This is a small planetarium observatory facility with accommodations for inside showings and outdoor telescope viewing platform.

Sharing Arrangements: Could possibly be scheduled for special shows and/or projects.

Dr. Kay Watkins, Chairman, Division of Science and Mathematics, Adams State College, Alamosa, Colorado 81102.

PLANETARIUM-OBSERVATORY (233)

University of Colorado, Boulder

Fiske Planetarium has a Zeiss Mark VI star projector and is capable of planetarium-related events, such as star, laser and music/dance shows.

Sharing Arrangements: Sharing arrangements can be made on an individual basis.

Bruce Bohannan, Director, Fiske Planetarium, University of Colorado, Boulder, Boulder, Colorado 80309.

PLANETARY DATA FACILITY (234)

University of Arizona

The Lunar and Planetary Laboratory, Space Imagery Center, is one of the most extensive collections of lunar and planetary photography in the world. It includes photographs of the moon from Ranger, Surveyor, Orbiter, and Apollo flights; of Mars, Venus, and Mercury from Mariner and Viking flights; and of Jupiter from Pioneer and Voyager flights; and the cartographic products produced from these data.

Sharing Arrangements: Tours are available to the general public by advance arrangement. Reference and referral services are provided. Materials do not circulate.

Gail Georgenson, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721.

PLANETARY GEOLOGY LABORATORY (235)

Arizona State University

The Planetary Geology Laboratory houses a 20m atmospheric boundary layer wind tunnel capable of operating up to 40m sec-1, and apparatus for simulating lava flows under controlled conditions. It consists of government-furnished equipment and NASA-sponsored Arizona State University cost shared instruments; maintenance and operation are wholly NASA sponsored.

Sharing Arrangements: Facilities are available outside the Planetary Geology group only through collaborative research projects.

Dr. Ronald Greeley, Department of Geology, Arizona State University, Tempe, Arizona 85281.

RADIATION CENTER LABORATORIES (236)

Oregon State University

The Radiation Center, with total useable space of about 40,000 square feet is designed to accommodate instruction and research programs in need of facilities for the handling of radioactive materials. All laboratories are equipped with a uni-direction ventilation system through absolute filters before release of any effluents to the environment. The Center is equipped with a great variety of radiation measurement and radioactive material handling equipment including many multi-channel analyzers linked with Ge(Li) detectors and liquid scintillation counters. Special facilities and equipment include a 500 curie Cobalt-60 source, 300 kilovolt X-ray generator, 14 MeV neutron generator, and large animal and small animal facilities.

Sharing Arrangements: The Radiation Center laboratories and equipment are available to all instruction and research programs from any academic unit. Center staff also provide consultation service in such areas as neutron activation analysis, radioactive tracer studies, neutron radiography studies, and radiation protection.

C. H. Wang, Director, Radiation Center, Oregon State University, 35th and Jefferson, Corvallis, Oregon 97331.

RADIOISOTOPE DATING AND TRACE-ELEMENT ANALYSIS FACILITY (237)

University of Arizona

The NSF Regional Facility for Radioisotope Dating and Trace-Element Analysis Facility provides use of a dedicated tandem accelerator for radioisotope dating and accelerators from the Van de Graff Laboratory (2MeV and 6MeV Van De Graff accelerators) for trace-element analysis by means of proton-induced X-ray emission.

Sharing Arrangements: The Facility is open to visitors; check with the institutional representative.

D. J. Donahue, Professor, Department of Physics, or P. E. Damon, Professor, Department of Geosciences, University of Arizona, Tucson, Arizona 85721.

ROCKET RESEARCH RANGE (238)

University of Alaska, Fairbanks

Poker Flat Research Range is an internationally used rocket launching facility run by the University of Alaska's Geophysical Institute. The Optics site on range houses low-light-level television systems, photometers, spectrometers, magnetometers, and riometers. Emphasis is on auroral and middle-atmospheric research, but there are also many excellent locations on the 7,000 acre range for air and precipitation sampling stations and other ground-based experiments.

Sharing Arrangements: The facility is used by a variety of agencies and universities, and new users are encouraged.

Neal Brown, Range Supervisor, Poker Flat Research Range, University of Alaska, Fairbanks, Fairbanks, Alaska 99701.

SCANNING ELECTRON MICROPROBE QUANTOMETER (239)

University of Arizona

The Lunar and Planetary Laboratory maintains an Applied Research Laboratories Scanning Electron Microprobe Quantometer (SEMQ). This instrument is capable of performing quantitative chemical analyses of minerals, alloys, metals and glasses with a detection limit of approximately 0.1 wt. % for each element present, and a spatial resolution of approximately 1/25000". The SEMQ is also capable of producing scanning electron microsope pictures with a magnification range of 200 to 160,000 and a maximum resolution of approximately 150 angstrom. Among other applications, the SEMQ has been used to analyze the most primitive materials in the solar system, lunar rocks and meteorites, and the oldest rocks on earth. It has also been used to search for the earliest forms of life on earth, to study pollen grains, and investigate the effects of poisonous heavy metals on body tissue.

Sharing Arrangements: Services are available from 9 a.m. - 5 p.m., Monday-Friday, in the Gerard P. Kuiper Space Sciences Building. The Microprobe is open to the public; a research proposal is required. An hourly charge is assessed.

Dr. Michael J. Drake, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721.

SEISMIC RESEARCH CENTER (240)

University of California, Riverside

Equipment includes the following: 6 PS-1 portable smoked-paper seismographs with Ranger seismometers horizontal/vertical as needed; l DR-100 3-channel digital event recorder with 3-channel amplifier and 3-component S-6000 seismometer; l DP-100 playback unit for DR-100 tapes,; WWVB radio; 12-channel RS-4 24-Channel SIE refraction units with about 4,000 feet cable; borehole geophone (3 component) on 250-meter cable (trailer-mounted winch); 3-component long-period observatory seismometers in storage.

Sharing Arrangements: Could be used to augment seismograph station coverage during crustal refraction studies, microearthquake investigations, aftershock studies, building motion analysis; most units ready for deployment at short notice.

Dr. Don Stierman, Assistant Professor, Department of Earth Sciences, University of California, Riverside, Riverside, California 9252l.

SMOG AND ACID RAIN RESEARCH STATION (241)

Harvey Mudd College

Claremont's location at the foothills of the San Gabriel mountains in the Los Angeles Basin makes it an ideal site for the study of smog and acid rain. The facility consists of rooftop collection stations and lab equipment for the analyses of samples.

Sharing Arrangements: Arrangements will be made on an individual basis.

Gregory Kok, Associate Professor of Chemistry, Harvey Mudd College, Claremont, California 91711.

SOLAR ENERGY FACILITY AND EQUIPMENT (242)

University of Colorado, Colorado Springs

This is a facility having various kinds of solar heating units such as passive, active air, and active water collectors, all instrumented or capable of instrumentation. Includes a 600 sf solar heated instrument trailer, a 450 sf passive solar heated shop, a 2,000 sf passive solar heated foam-coated sprayed concrete dome research lab, and a (forthcoming) wind generator. Also minor equipment such as solar-heated hot tub, outhouse, food drier, and various solar concentrations.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. Ronald R. Bourassa, Chairman, Physics and Energy Sciences Department, or Dr. James A. Null, Dean, College of Letters, Arts, and Science, University of Colorado, Colorado Springs, Austin Bluffs Parkway, Colorado Springs, Colorado 80907.

SPACE IMAGE PROCESSING FACILITY (243)

Arizona State University

The Space Image Processing Facility is a computer-based digital image processor with interactive and hard-copy output used for enhancing and digitally manipulating spacecraft images for research applications. Consists of GFE (government-furnished equipment) and NASA-sponsored ASU cost-shared instruments; maintenance and operation are wholly NASA sponsored.

Sharing Arrangements: Facilities are available outside the Planetary Geology group only through collaborative research projects.

Dr. Ronald Greeley, Department of Geology, Arizona State University, Tempe, Arizona 85281.

SPACE PHOTOGRAPHY LABORATORY (244)

Arizona State University

The Space Photography Laboratory contains research collections of more than a half million images and maps from most lunar and planetary missions, plus working collections of air photos of volcanic and aeolian analogs on Earth. Consists of GFE (government-furnished equipment) and NASA-sponsored Arizona State University cost-shared instruments; maintenance and operations are wholly NASA sponsored.

Sharing Arrangements: Facilities are available outside the Planetary Geology group only through collaborative research projects.

Dr. Ronald Greeley, Department of Geology, Arizona State University, Tempe, Arziona 85281.

TREE-RING RESEARCH LABORATORY (245)

University of Arizona

The Laboratory of Tree-Ring Research contains specialized dendrochronological equipment for tree-ring sample collection, wood surface preparation, measuring and processing tree-rings, and x-ray/densitometric analysis. The laboratory also includes approximately 250,000 catalogued tree-ring samples collected from living and dead trees. Also available is a specialized library of books and journals related to dendrochronology. Active data banks contain processed tree-ring chronologies, climatic and hydrologic records, and archaeological tree-ring dates and site information. The International Tree-Ring Data Bank (ITRDB) holdings of selected tree-ring chronologies from throughout the world is also available.

Sharing Arrangements: Available to faculty and students of the University of Arizona and to other qualified scholars through prior arrangement. ITRDB holdings restricted to participating donors.

Bryant Bannister, Director, Laboratory of Tree-Ring Research, University of Arizona, Tucson, Arizona 85721.

VAN DE GRAAFF NUCLEAR PARTICLE ACCELERATOR (246)

California State University, Los Angeles

Equipment includes: a 4 million volt accelerator, beam handling bending magnet, steerers and quadrupole (focusing) magnets, ND 4420 computer-based data acquisition system, and modular electronics.

Sharing Arrangements: Arrangements will be made on an individual basis.

Dr. Demetrius Margaziotis, Professor of Physics, California State University, Los Angeles, 5151 State University Drive, Los Angeles, California 90032.

WATER-RELATED FIELD LABORATORY (URBAN AND DESERT WATERSHEDS) (247)

University of Arizona

The laboratory of the Water Resources Research Center is equipped for water-related research. The watersheds are fully instrumented from a hydrological viewpoint.

Sharing Arrangements: The laboratory and watershed facilities and data are available for use by others. For example, vegetative studies are made on the watersheds by other departments using the available hydrologic data as supplemental information.

Sol Resnick, Director, Water Resources Research Center, University of Arizona, Tucson, Arizona 85721.

WELL SAMPLE REPOSITORY (248)

California State College, Bakersfield

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The California Well Sample Repository is California's only facility for permanent storage and public use of cores, sidewall samples, drill cuttings, outcrop samples, microfauna slides, foundation borings, and mineral suites. The Repository is currently processing cores and samples from more than 3,000 wells throughout the state. A catalog is available on request. The Repository also conducts open house displays of particular collections.

Sharing Arrangements: The repository is available for use by the public. Fees are charged for commerical use. The facility is available for faculty and student research, without charge.

John R. Coash, Dean, School of Arts and Sciences, California State College, Bakersfield, 9001 Stockdale Highway, Bakersfield, California 93309.

12. Psychology

ANIMAL BEHAVIOR LABORATORY (249)

University of Montana

The laboratory is located at Fort Missoula, approximately four miles west of the main campus. It is a one-story cement block structure which formerly served as an army prison. The building contains approximately 3,000 square feet of research space, which includes animal rooms, research cubicles, animal surgery, histology, computer rooms, and a small shop. The building surrounds an inner court that houses a breeding colony of rhesus monkeys.

Sharing Arrangements: Research is being conducted on over 100 rhesus monkeys in cooperation with the USDA Human Nutrition Laboratory, Grand Forks, North Dakota. Interdisciplinary interests and contributions are encouraged and space and equipment have been shared with departments of zoology, microbiology, anthropology, chemistry, wildlife biology, and pharmacy. Additional space will be available for the study and breeding of nonhuman primates when psychology moves its small animal labs to their new science building on campus in 1981.

Dr. David Strobel, Department of Psychology, University of Montana, Missoula, Montana 59812.

MARINE MAMMAL LABORATORY (250)

University of Hawaii, Manoa

The Kewalo Basin Marine Laboratory has two large sea-water tanks and currently houses two bottlenosed dolphins.

Sharing Arrangements: Post-doctoral students or faculty wishing to participate in on-going research program on communication and behavior may write to individual below stating academic background, pertinent qualifications, and research interests. Individuals must be self-supporting.

Dr. Louis M. Herman, Professor, Department of Psychology, University of Hawaii, Manoa, 2430 Campus Road, Honolulu, Hawaii 96822

PRIMATE LAB (251)

California State University, Los Angeles

The Primate Lab is a small research facility maintained by the Department of Psychology for the study of naturally occurring behavior in noctural prosimian primates. Animals are housed in two spacious rooms designed to simulate the natural environment. Viewing equipment includes a remote-controlled video camera, monitor, and tape recorder.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Annette Ehrlich, Department of Psychology, California State University, Los Angeles, Los Angeles, California 90032.

PRIMATE RESEARCH CENTER (252)

University of California, Riverside

The Center has a large indoor and outdoor housing facility. It is one of only two in the University of California system.

Sharing Arrangements: Students from other University of California campuses as well as Rutgers use the colony for observation and data collection. Area groups are given escorted tours and the colony is open for tours on Open House Day.

Steve Bunyak, Animal Resources Manager, Department of Psychology, University of California, Riverside, Riverside, California 92521.

PSYCHOACOUSTICS LABORATORY (253)

Arizona State University

The psychoacoustics laboratory can be used for conducting a wide range of auditory perception experiments. The laboratory provides computer control for generating auditory stimuli and collecting data. Sound rooms and analog audio equipment are used for precise measurements of the auditory capacities of normal and partially hearing subjects.

Sharing Arrangements: Qualified researchers may request permission to use this research facility.

Dr. Barry Leshowitz, Psychoacoustics Laboratory, Department of Psychology, Arizona State University, Tempe, Arizona 85281.

PSYCHOPHYSIOLOGICAL LABORATORY (254)

Arizona State University

The Psychophysiological Laboratory has the capability of measuring all psychophysiological responses from humans in a variety of complex sensory-motor tasks.

Sharing Arrangements: Qualified researchers may request permission to use this research facility.

Dr. Ernest Lindholm, Psychophysiological Laboratory, Department of Psychology, Arizona State University, Tempe, Arizona 85281.

13. Social Sciences

AMERICAN HERITAGE RESEARCH CENTER (255)

University of Wyoming

The Center contains archival holdings of some 7,310 individual collections. Representative categories include economic and legal history, aviation, business and finance, conservation, dude ranching, illustration, journalism, military policy, mining, mountaineering, music, performing arts, petroleum, railroading, science, science fiction, water resources, and Western writers.

Sharing Arrangements: The Center is open to all qualified researchers and scholars. Arrangements can be made through the director of the Center.

Gene M. Gressley, Director, American Heritage Research Center, Box 3334, University Station, University of Wyoming, Laramie, Wyoming 82071.

ANTHROPOLOGY MUSEUM (256)

California State University, Hayward

The Clarence E. Smith Museum of Anthropology is composed of three galleries. Two of the galleries house special exhibits as well as ethnographic displays related to regional coursework. The third gallery houses two fairly permanent exhibits, one featuring the evolution of man and culture, tho other depicting the various ecological adaptations of Native California Indians from Bay Area coastal settlements.

Sharing Arrangements: Could be used as a research facility by students and faculty from other institutions.

Robert K. McKnight, Department of Anthropology, California State University, Hayward, Hayward, California 94524.

ANTHROPOLOGY MUSEUM (257)

San Francisco State University

The Adan E. Treganza Anthropology Museum maintains collections of ethnographic and archaeological objects from all over the world together with photographs, slides, and audio tapes of anthropological interest. Major collections include artifacts and records from local archaeological sites, a large number of baskets from western North American, the Elwood

H. Allcutt collection of southwestern Indian photographs, the Lisa Stephens photo collection, which includes 8,000 photographs of Irish and Scottish life (rural, farming, household, architecture) and field tapes of Irish music collected both in San Francisco and in Ireland.

Sharing Arrangements: The museum and its facilities are open to the public by appointment when circumstances permit. The collections are available for use by students, faculty, and visiting scholars. The museum publishes a monographic series and mounts exhibits both on and off campus.

Robin F. Wells, Curator, Adan E. Treganza Anthropology Museum, HLL 114, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132.

ARCHAEOLOGICAL LABORATORIES (258)

University of California, Santa Barbara

The Archaeological Laboratories assist in processing and analyzing data from archaeological sites. A comparative collection of shellfish, fish, birds, and land and sea mammals housed in the laboratories facilitate identification of subsistence remains, especially from sites on the California coast. The Department of Anthropology also houses research collections from archaeological sites on the Santa Barbara Channel and adjacent regions. As a group, these collections are perhaps the most extensive obtained under modern techniques of archaeological excavation from the Santa Barbara Channel region.

Sharing Arrangements: The collections are accessible to any interested person, but loans are made only under extraordinary circumstances. Researchers are encouraged to use the archaeological laboratories rather than borrow collections.

Michael A. Glassow, Department of Anthropology, University of California, Santa Barbara, Santa Barbara, California 93106.

ARCHAEOLOGICAL LABORATORY (259)

Eastern New Mexico University

The Archaeological Laboratory contains research labs for ceramic, lithic and paleobotanical analysis integrated with computer science systems for archaeological data storage, retrieval and analysis. A special feature of the laboratory is the Blackwater Draw National Historical Site, a major stratified paleoindian habitation site.

Sharing Arrangements: Labs can be used following negotiations with research personnel and integration of research goals with those of the anthropology faculty and university. Site use must be proposed via systematic research proposal reviewed by the New Mexico State Historical Preservation Officer.

Dean of Advanced Professional Studies and Research, Eastern New Mexico University, Portales, New Mexico 88130.

AVIATION HISTORY COLLECTION (260)

Harvey Mudd College

The Carruthers Aviation History Collection contains 4,000 volumes (and photographs, memorabilia, clippings, etc.) on the history of balloon flight, pioneer aviators, World War I and II aeronautics, and company histories of selected air lines and manufacturers. The collection is in the Norman F. Sprague Memorial Library, which serves all six of The Claremont Colleges.

Sharing Arrangements: Items cannot be loaned but researchers are welcome to visit.

David Kuhner, Librarian, Sprague Library, Harvey Mudd College, Claremont, California 91711.

BLACK HISTORY COLLECTION (261)

University of California, Davis

The collection contains authentic documents of the sale of slaves in the 19th century. Also included is a pamphlet collection which reflects the life, time, activities, social behavior, and customs of the American black community in both the 19th and 20th centuries. W.E.B. DuBois, George Washington Carver, Pettis Perry, Booker T. Washington, and Gerrit Smith are among the authors in the collection.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

CALIFORNIA PROMOTIONAL COLLECTION (262)

University of California, Davis

This collection of ephemera from various California cities and counties in the 19th and 20th centuries documents events which played a role in the formation of the West. It includes a grouping of early 20th century brochures reflecting the "boosterism" in various California counties.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

CONTEMPORARY ISSUES COLLECTION (263)

University of California, Davis

American trends and issues from the early 1960's to the present are contained in ephemeral publications reflecting many causes and vastly divergent opinions from every political direction, e.g., student unrest, women's liberation, ecology, civil rights, U.S. military involvement. Among the groups represented are the John Birch Society, Zero Population Growth, the Ku Klux Klan, and Ecology Action.

Sharing Arrangements: Photocopying where possible.

Donald Kunitz, Head, Department of Special Collections, Shields Library, University of California, Davis, Davis, California 95616.

DEL AMO PAPERS (264)

California State University, Dominguez Hills

Monographs, periodicals, reprints, pamphlets and other materials from the Del Amo Foundation are included here. The Foundation sponsored a highly successful program of cultural exchange between Southern California and Spain. Also included are records and correspondence files of the Del Amo Estate Company.

Sharing Arrangements: On-site use only, by arrangement with the University library.

Kenneth Bennett, Head Collection Development Librarian, California State University, Dominguez Hills, Carson, California 90747.

DRY LANDS RESEARCH INSTITUTE (265)

University of California, Riverside

The Institute engages in research on regional economic development, land use, planning, energy, food, and range studies for arid regions. The Institute has the capability to generate a detailed input-output model to a two-digit SIC code for any county in the United States. The model serves as an important base for planning regional economic development in rural and urban areas.

Sharing Arrangements: The Institute prticipates with other institutions in research programs.

Stahrl W. Edmunds, Director, Dry Lands Research Institute, University of California, Riverside, Riverside, California 92521.

GEOGRAPHY/ANTHROPOLOGY FIELD DIG (266)

Eastern Washington University

The Geography and Anthropology departments are digging a site near Odessa, Washington, which may lead to some of the earliest known evidence of man in the Inland Northwest. The site is located in an enclosed basin that may have been carved from volcanic rock some 15,000 to 25,000 years ago.

Sharing Arrangements: Arrangements can be made on an individual basis.

Sarah Keller, Department of Anthropology, Eastern Washington University, Cheney, Washington 99004.

HISTORICAL MUSEUM (267)

Fort Wright College

The Fort Wright College Historical Museum contains artifacts from the turn-of-the-century which are housed in the former post commander's home. Numerous other artifacts are in storage. A museum docent training program and a travelling "trunk tour" to schools, and other groups are also offered by the museum.

Sharing Arrangements: The Museum is open without charge Saturdays and Sundays 1:00 p.m. to 5:00 p.m.

Mary E. Dunton, Museum Director, Fort Wright College, W. 4000 Randolph Road, Spokane, Washington 99204.

HISTORY COLLECTION (268)

Northern Arizona University

A special collection in the Northern Arizona University Library houses original source materials relating to the history and culture of Arizona and the Southwest from prehistoric to modern times.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Robert Kemper, Director of the Libraries, Northern Arizona University, Box 6022, Flagstaff, Arizona 86011.

HISTORY COLLECTION (269)

University of California, Santa Barbara

The William Wyles Collection contains 29,000 volumes on the Civil War, the Lincoln administration, and Westward expansion.

Sharing Arrangements: The collection is available during regular Special Collections hours (8-5 Monday-Friday and some evenings and weekends). Most books and all manuscripts must be used in the library.

Christian Brun, Head, Department of Special Collections, Library, University of California, Santa Barbara, Santa Barbara, California 93106.

MAP AND CARTOGRAPHIC LABORATORY (270)

California State University, Northridge

This collection, probably second largest in the West, includes approximately 250,000 maps, 7,000 aerial photographs, 400 atlases and 700 wall maps. It is the designated depository for the strategic map collection of the U.S. Defense Mapping Agency, the U.S. Geological Survey and the Canadian Mapping Service. The archival collection contains maps from the 1800s including the unique Sanborn collection of hand-colored and lettered maps dating back to 1884 and designed for fire insurance underwriting purposes.

Sharing Arrangements: Arrangements can be made on an individual basis.

Robert Provin, Chief Cartographer, California State University, Northridge, 18111 Nordhoff Street, Northridge, California 91330.

NATIVE AMERICAN CULTURES MUSEUM (271)

Gonzaga University

Adjacent to the Gonzaga campus, the Museum of American Cultures is one of the finest Northwest Indian collections in the world.

Sharing Arrangements: Materials available through interlibrary loan.

Robert L. Burr, Director, Crosby Library, Gonzaga University, East 502 Boone Avenue, Spokane, Washington 99258.

NATURAL HISTORY MUSEUM (272)

University of Alaska, Fairbanks

The museum houses a prized collection of cataloged specimens of natural and cultural history materials from Alaska and the North.

Sharing Arrangements: Arrangements can be made on an individual basis.

Director of the Museum, University of Alaska, Fairbanks, Fairbanks, Alaska 99701 or curators of individual collections.

RANCHO SAN PEDRO COLLECTION (273)

California State University, Dominguez Hills

This special collection contains original documents and records of the Dominguez family and the Dominguez Water Company. The Dominguez family owned the Ranch San Pedro, one of the oldest and most successful of the Spanish land grants in California, located in what is now southern Los Angeles County. The collection also includes historical studies and publications relevant to the area.

Sharing Arrangements: On-site use only; must be pre-arranged with the University Library.

Kenneth Bennett, University Library, California State University, Dominguez Hills, 1000 E. Victoria Street, Dominguez Hills, California 90747.

SEX RESEARCH CENTER (274)

San Francisco State University

The Center for Homosexual Education, Evaluation, and Research (C.H.E.E.R.) is an Academic Auxiliary Unit of San Francisco State University. The Center is funded from public and private sources. The chief purpose of the Center is the study of social sex-roles (femininity and masculinity) and sexual orientation. The Center edits The Journal of Homosexuality, a quarterly publication. Courses are offered through the Human Sexuality Studies Minor at San Francisco State University.

Sharing Arrangements: The Center is in the process of developing a resource library of research done on social sex-roles and sexual orientation, but is limited by space, time, and funding.

C.H.E.E.R., Psychology Building, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132. Telephone (415) 469-1137.

SIMULATION LABORATORY (275)

University of California, Santa Barbara

The Political Institutions Simulation Laboratory (POLIS) is a simulation-gaming laboratory with facilities for observation and video and audio recording. Approximately one-half of the space is reconfigurable. An adjoining section is suitable for small groups research.

Sharing Arrangements: Can be arranged, but nature of the laboratory requires users to be in residence at time of use, i.e., equipment is not portable.

William D. Hyder, Administrator of POLIS Laboratory, Department of Political Science, University of California, Santa Barbara, Santa Barbara, California 93106.

SOCIAL DATA ANALYSIS CENTER (276)

Montana State University

The Center for Social Data Analysis has merged several national county data cases into a single integrated data system that can be accessed in a cost-efficient manner through the Generalized Rapid Access Software Package (GRASP). Rapid access can also be obtained to the First Quarter Continuous Work History file, which provides longitudinal information for a 1 percent sample of the social security-covered employment force.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Jack Gilchrist, Center for Social Data Analayis, Montana State University, Bozeman, Montana 59717.

SOCIAL RESEARCH CENTER/PUBLIC OPINION LABORATORY (277)

Washington State University

The Social Research Center/Public Opinion Laboratory is a complete telephone survey facility. It contains 14 telephones, each in a separate carrel within a central location. The laboratory is equipped with headsets and central monitoring equipment. The Social Research Center also maintains a complete set of current telephone directories for the state of Washington as well as lists of trained interviewers and supervisors who are available for survey work. The Public Opinion Laboratory facilities are generally available for use by researchers at cost. In some circumstances the Social Research Center will undertake surveys on a contrect basis. In addition to the Public Opinion Laboratory, the Social Research Center also maintains a Data Set Directory system for the Social Sciences. This system consists of a computerized (interactive) index for Social Science data sets of general interest that are available at Washington State University.

Sharing Arrangements: Sharing arrangements are on at cost basis. Usual charges include computer time, line rentals, toll charges, and personnel costs where applicable.

Dr. Eugene Rosa, Public Opinion Laboratory Coordinator, Social Research Center, Washington State University, Pullman, Washington 99164.

SOCIAL SCIENCE RESEARCH INSTITUTE (278)

University of Oregon

The Institute for Social Science Research exists to promote and support interdisciplinary research among the social sciences, in particular at the University of Oregon. It is a member of the Inter-University Consortium for Political and Social Research and provides access to the data resources of the Consortium.

Sharing Arrangements: Arrangements can be made on an individual basis.

Keith Poole, Political Science Department, University of Oregon, Eugene, Oregon 97403.

SUTRO EGYPTIAN COLLECTION (279)

San Francisco State University

The Sutro Egyptian Collection, an extensive collection of Egyptian artifacts from predynastic to Greco-Roman times, is housed in laboratories in the Science Building under the auspices of the Classics Department. The faculty of the Classics Department have developed a course in Museum Training in which students learn methods of identification, dating, restoration, and conservation of ancient artifacts.

Sharing Arrangements: The museum and its facilities are open to the public. The collections are available for use by students, faculty, and visiting scholars. The museum publishes a monographic series and mounts exhibits both on and off campus.

Marian Bernstein, Curator, The Sutro Egyptian Collection, Science 115, San Francisco State University, San Francisco, California 94132.

URBAN ARCHIVES (280)

California State University, Northridge

The archives contain records of voluntary associations of Los Angeles County, marking the historical growth and development of the metropolitan area. The collection includes labor records (including microfilms of all labor newspapers in California), industrial association records, material dealing with 1930s and 40s pro-Nazi and anti-Semitic literature and records, League of Women Voters archival materials, records of the Chicano Press Association, and records dealing with teacher unionism.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Leonard Pitt, Professor of History, California State University, Northridge, 18111 Nordhoff Street, Northridge, California 91330.

WESTERN FOLKLORE ARCHIVE (281)

Utah State University

The Fife Folklore Archive contains slides, tapes, and manuscript recordings of Western American folklore.

Sharing Arrangements: Copies of slides and manuscripts are available upon payment of duplicating costs. Study facilities are available at the archive.

William A. Wilson, Professor of English and History, Utah State University, Logan, Utah 84322.

14. Other Fields

AGING STUDIES CENTER (282)

Eastern Washington University

The Center for Studies in Aging is housed within the School of Social Work and Human Services.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. John O'Neill, Dean, School of Social Work and Human Services, Eastern Washington University, Cheney, Washington 99004.

COMPUTERIZED LEGAL RESEARCH (283)

Gonzaga University

Facilities consist of an on-line research terminal providing rapid keyword access to all appellate cases reported in all state and federal courts since 1967.

Sharing Arrangements: Open to members of the Washington State Bar or approved users at an hourly rate.

Dennis J. Stone, Law Librarian and Assistant Professor of Law, Gonzaga University School of Law, Box 3528, Spokane, Washington 99220.

CRIMINAL LAW INFORMATION RESEARCH CENTER (284)

University of Montana

The Montana Criminal Law Information Research Center (MONTCLIRC) provides research assistance and periodic summaries of current law to judges, prosecutors, defenders, and law enforcement personnel within the Montana criminal justice system. The Center is staffed by law students and directed by a faculty member with long experience in the field of criminal law.

Sharing Arrangements: The results of MONTCLIRC research endeavors, which include a bank of releasable memoranda, could be used by law students and graduate students in related fields whose particular interests are in the field of criminal law and procedure.

James T. Ranney, Director, Montana Criminal Law Information Research Center, University of Montana School of Law, Missoula, Montana 59812.

ENERGY LAW CENTER (285)

University of Utah

The Center is housed in the Law School. The missions of the Center include teaching, research and public service related to energy, environment and natural resource problems. The Center is the only one in the West providing service in all of these areas.

Sharing Arrangements: Consultation and library access available in response to inquiries from other institutions.

Dr. Donald N. Zillman, Director, Energy Law Center, University of Utah, Salt Lake City, Utah 84112.

FOREIGN LANGUAGE AUDITORIUM (286)

Monterey Institute of International Studies

The 190-seat SFB Morse Auditorium is equipped for simultaneous interpretation into four languages. The system includes four interpreter booths and earphones for 180 seats. Projection equipment is provided and the stage can accommodate up to six speakers or panelists. Both simultaneous and consecutive interpreters are available working with English, French, German, Russian or Spanish.

Sharing Arrangements: All interested persons are eligible to use the facility. Costs are subject to negotiation according to services required.

Director, Community Relations, Monterey Institute of International Studies, 425 Van Buren Street, Monterey, California 93940.

GREEK MANUSCRIPT RESEARCH CENTER (287)

Pacific Union College

The Center is located in Irwin Hall at Pacific Union College. The purpose of the Center is to examine and evaluate primary documents of Christianity: Greek manuscripts of the New Testament. Present holdings include approximately 100 microfilmed copies of these Greek manuscripts; plans call for the purchase of around 210 more, which will make the Center one of the largest holders of Greek manuscripts on microfilm in the U.S.

Sharing Arrangements: No policy has been established regarding the loan of the microfilm, but anyone is welcome to make arrangements to use the microfilm and microfilm readers at the facility.

Professor W. L. Richards, Director, Greek Manuscript Research Center, Pacific Union College, Angwin, California 94508.

INTERNATIONAL RELATIONS CENTER (288)

San Francisco State University

The International Relations Center is an experiment in closing the gap between knowledge of world affairs and popular understanding. It was designed to increase the quantity and quality of information flow to the publics that are concerned about what is going on in the world. The Center is a teaching laboratory, a data bank, a clearinghouse and a forum for the expression of the widest range of ideas about matters of international significance.

Sharing Arrangements: Facilities are available for public use.

Professor D. K. Marvin, Director, International Relations Center, HLL 360, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132.

RURAL HUMAN SERVICES INSTITUTE (289)

California State University, Fresno

The Western Regional Institute for the Study of Rural Human Services focuses on the study of problems related to the delivery of human services in rural and isolated areas.

Sharing Arrangements: The Institute is open to participation by faculty and students interested in research and study of rural human service delivery. Sharing is open-ended during the academic year, participants need only have a basic research design or identifiable area of investigation.

Dr. Wynn Tabbert, School of Social Work, California State University, Fresno, Fresno, California 93740.

TEXTILE LABORATORY (290)

University of Arizona

The facility is equipped with physical testing instruments and a constant temperature and controlled humidity room. A small laboratory table for chemical testing is available.

Sharing Arrangements: Subject to individual negotiation.

Mary Jean Wylie, Director, Textile Laboratory, School of Home Economics, University of Arizona, Tucson, Arizona 58721.

TEXTILE TESTING LABORATORY (291)

California State University, Los Angeles

The Laboratory contains a vast assortment of sophisticated testing equipment for scientific evaluation and identification of textiles. Equipment includes: Atmospheric Fume Chamber, Tensile Strength Tester, Color Difference Meter, Vertical Flammability Tester, Launderometer, Wrinkler, Wrinkler Recovery Tester, Relative Humidity and Temperature Indicator, Stiffness Tester, Perspirometer, and Crockmeter.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. Susan Kaiser, Director, Textile Testing Laboratory, California State University, Los Angeles, Los Angeles, California 90032.

UNEMPLOYMENT STUDIES CENTER (292)

Eastern Washington University

The Center for the Study of the Effects of Unemployment is housed within the School of Social Work and Human Services.

Sharing Arrangements: Arrangements can be made on an individual basis.

Dr. John O'Neill, Dean, School of Social Work and Human Services, Eastern Washington University, Cheney, Washington 99004.

UNITED STATES/JAPAN INSTITUTE (293)

San Francisco State University

The Institute is a special purpose unit of the University, organized in March 1976 with a 16-member faculty/community Board of Directors and a full-time director. The Institute provides opportunities for students and faculty to study and research in the field of U.S./Japan relations, to conduct seminars and conferences, to travel to Japan for study, to participate in community activities and to act as host for visiting Japanese students and scholars.

Sharing Arrangements: Efforts are underway to broaden the activities of the Institute's scholarship program to include universities and colleges in the San Francisco Consortium. The Institute will further develop its student scholarship program, its student exchange program and the diversity of its academic seminars and workshops and expand its links with Japanese educational institutions as well as organizations in the United States.

Dr. Harrison Holland, U.S./Japan Institute Director, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132.

WOMEN'S STUDIES INSTITUTE (294)

University of Arizona

The Southwest Institute for Research on Women is designed to promote and facilitate research on women by scholars from Utah, Colorado, New Mexico, and Arizona. The Institute's activities include the establishment of a Regional Research Clearinghouse, Newsletter, regional research seminars, and interdisciplinary collaborative research projects.

Sharing Arrangements: Anyone can be placed on the mailing list, receive the Newsletter, and/or use the Research Clearinghouse by writing or phoning the Institute.

Myra Dinnerstein, Director, Southwest Institute for Research on Women,
269 Modern Languages, University of Arizona, Tucson, Arizona 85721.

Appendix

Facility Description Form

Please use this form to nominate an uncommon research facility for inclusion in the next edition of the Catalog of Uncommon Facilities in Western Colleges and Universities. This form will be kept on file until preparation of the next edition begins. At that time the person listed below will be contacted to verify this information.

FACILITY ____

(generic name, e.g., Marine Institute)

____

(formal name, e.g., John Fowler Marine Institute)

INSTITUTION ____

DESCRIPTION ____

____

____

____

SHARING ARRANGEMENTS ____

____

____

INSTITUTIONAL REPRESENTATIVE TO BE CONTACTED FOR ACCESS INFORMATION

____

____

PRIMARY RESEARCH FIELD (CHAPTER) ____

SECONDARY RESEARCH FIELDS (INDEX LISTING) ____

____

Please return to: Uncommon Facilities Catalog
Graduate Education Project
WICHE
P.O. Drawer P
Boulder, Colorado 80302

Thank you for your contribution.

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